



December 2022

# THRIFTY FOOD PLAN

## Better Planning and Accountability Could Help Ensure Quality of Future Reevaluations

Accessible Version

# GAO Highlights

Highlights of [GAO-23-105450](#), a report to congressional requesters

## Why GAO Did This Study

SNAP supplemented the food budgets of more than 41 million people in 2021. Following a provision in the Agriculture Improvement Act of 2018 to reevaluate the TFP by 2022, USDA completed a reevaluation of the TFP in 2021.

GAO was asked to review the reevaluation. This report examines (1) USDA's administrative process for reevaluating the TFP in 2021 and the extent to which the process employed leading project management practices; (2) the extent to which USDA gathered and analyzed external input to inform the reevaluation; and (3) how the methodology and results of the reevaluation compared to methodological standards.

GAO reviewed USDA documents, interviewed officials and external experts, and compared the information collected to key project planning practices; relevant OMB and USDA guidelines for information quality, peer review, and scientific integrity; federal standards for internal control; and GAO's assessment methodology for economic analysis.

## What GAO Recommends

GAO is making eight recommendations, including that USDA develop policies to ensure TFP reevaluations follow key project management practices, peer review guidelines, and quality standards; and publish information to allow external parties to reproduce results. USDA did not explicitly agree or disagree with the recommendations but disagreed with GAO's selection and application of certain criteria. GAO believes the criteria were appropriate and stands by the findings, conclusions, and recommendations.

View [GAO-23-105450](#). For more information, contact Kathryn A. Larin at (202) 512-7215 or [larink@gao.gov](mailto:larink@gao.gov).

December 2022

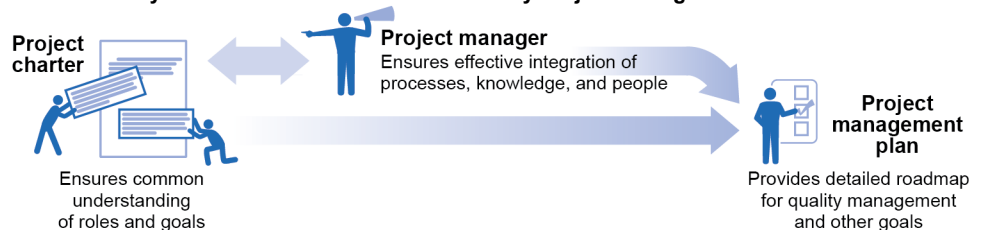
## THRIFTY FOOD PLAN

### Better Planning and Accountability Could Help Ensure Quality of Future Reevaluations

## What GAO Found

The Thrifty Food Plan (TFP) describes how much it costs to eat a healthy diet on a limited budget, and is the basis for maximum Supplemental Nutrition Assistance Program (SNAP) benefits. In 2021, the U.S. Department of Agriculture (USDA) reevaluated the Thrifty Food Plan and made decisions that resulted in increased costs and risks for the reevaluated TFP. Specifically, the agency (1) allowed the cost of the TFP—and thus SNAP benefits—to increase beyond inflation for the first time in 45 years, and (2) accelerated the timeline of the reevaluation by 6 months in order to respond to the COVID-19 emergency. The reevaluation resulted in a 21 percent increase in the cost of the TFP and the maximum SNAP benefit. The reevaluation was complex and involved several USDA offices. However, USDA began the reevaluation without three key project management elements in place. First, without a charter, USDA missed an opportunity to identify ways to measure project success and to set clear expectations for stakeholders. Second, USDA developed a project schedule but not a comprehensive project management plan that included certain elements, such as a plan for ensuring quality throughout the process. Third, the agency did not employ a dedicated project manager to ensure that key practices in project management were generally followed.

#### USDA's Thrifty Food Plan Reevaluation Lacked Key Project Management Elements



Source: GAO analysis of "A Guide to the Project Management Body of Knowledge." | GAO-23-105450

#### Accessible Data for USDA's Thrifty Food Plan Reevaluation Lacked Key Project Management Elements

##### Project charter

- Supports project manager and project management plan; Supported by project manager
- Ensures common understanding of roles and goals

##### Project manager

- Supports Project charter and project management plan
- Ensures effective integration of processes, knowledge, and people

##### Project management plan

- Supported by project charter and project manager
- Provides detailed roadmap for quality management and other goals

USDA gathered external input, but given time constraints, did not fully incorporate this input in its reevaluation. Specifically, USDA substituted a limited internal review of the TFP report for the formal peer review it had initially planned. This review was conducted by USDA officials who had been involved in the TFP reevaluation, and therefore were not independent. The TFP report lacked a comprehensive, external peer review to assess the transparency, clarity, or interpretation of the results. As a result, the review also did not meet relevant Office of Management and Budget (OMB) and USDA guidelines, such as the requirement to publish a report with the results of a peer review.

The complexity of the economic model USDA uses to calculate the TFP led officials to make numerous methodological and policy decisions during the 2021 reevaluation, as they had in past reevaluations. However, GAO found that key decisions did not fully meet standards for economic analysis, primarily due to failure to fully disclose the rationale for decisions, insufficient analysis of the effects of decisions, and lack of documentation. As a result, members of the public and policymakers reading the TFP report may not understand the rationale for decisions made by USDA officials, and external parties would face difficulties reproducing the TFP, which further decreases transparency and accountability.

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# Contents

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GAO Highlights	ii
<b>Why GAO Did This Study</b>	ii
<b>What GAO Recommends</b>	ii
<b>What GAO Found</b>	ii
Letter	1
Background	6
USDA Began and Accelerated the 2021 Thrifty Food Plan Reevaluation without Key Project Management Elements in Place	12
USDA Gathered External Input for the Thrifty Food Plan Reevaluation but Its Approach to Peer Review Had Limitations	24
USDA Did Not Transparently Document or Analyze All Methodological Decisions and Measures for Success	34
Conclusions	46
Recommendations for Executive Action	48
Agency Comments and Our Evaluation	50
Appendix I: Objectives, Scope, and Methodology	55
Appendix II: Comments from the U.S. Department of Agriculture	62
Accessible Text for Appendix II: Comments from the U.S. Department of Agriculture	72
GAO's Comments	83
Appendix III: GAO Contact and Staff Acknowledgments	92
Tables	
Table 1: GAO Assessment of Economic Analysis in the Thrifty Food Plan (TFP) Reevaluation	37
Table 2: GAO's Method for Analysis of the 2021 Thrifty Food Plan Market Basket for a Reference Family of Four	61
Figures	
Figure 1: Timeline of Selected USDA Food Plans and Thrifty Food Plan Reevaluations	8
Accessible Data for Figure 1: Timeline of Selected USDA Food Plans and Thrifty Food Plan Reevaluations	8
Figure 2: Method for Thrifty Food Plan Reevaluation	11

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Accessible Data for Figure 2: Method for Thrifty Food Plan Reevaluation	11
Figure 3: Three Key Elements of Project Management	15
Accessible Data for Figure 3: Three Key Elements of Project Management	15
Figure 4: Key USDA Offices and Individuals Involved in 2021 Thrifty Food Plan Evaluation	22
Accessible Data for Figure 4: Key USDA Offices and Individuals Involved in 2021 Thrifty Food Plan Evaluation	22
Figure 5: Timeline of Information Gathering for the 2021 Thrifty Food Plan Reevaluation	25
Accessible Data for Figure 5: Timeline of Information Gathering for the 2021 Thrifty Food Plan Reevaluation	25
Figure 6: Example of Manual Adjustments to Thrifty Food Plan Constraints	35
Accessible Data for Figure 6: Example of Manual Adjustments to Thrifty Food Plan Constraints	35
Figure 7: How the Thrifty Food Plan Calculation Process Considers Food Waste	36
Accessible Data for Figure 7: How the Thrifty Food Plan Calculation Process Considers Food Waste	36
Figure 8: Selection of Foods from Food Database to Market Basket for the 2021 Thrifty Food Plan Reevaluation	44
Accessible Data for Figure 8: Selection of Foods from Food Database to Market Basket for the 2021 Thrifty Food Plan Reevaluation	44

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### Abbreviations

ARS	Agricultural Research Service
CNPP	Center for Nutrition Policy and Promotion
ERS	Economic Research Service
FNS	Food and Nutrition Service
NESR	Nutrition Evidence Systematic Review
OIG	Office of Inspector General
OMB	Office of Management and Budget
PMBOK® Guide	A Guide to the Project Management Body of Knowledge
SNAP	Supplemental Nutrition Assistance Program
TFP	Thrifty Food Plan
USDA	U.S. Department of Agriculture

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December 14, 2022

The Honorable John Boozman  
Ranking Member  
Committee on Agriculture, Nutrition, and Forestry  
United States Senate

The Honorable Glenn “GT” Thompson  
Ranking Member  
Committee on Agriculture  
House of Representatives

The Supplemental Nutrition Assistance Program (SNAP)—one of the largest social safety net programs in the United States—provides nutrition benefits to supplement the food budgets of low-income families. The U.S. Department of Agriculture (USDA) is responsible for administering SNAP in partnership with states. The goal of SNAP is to help low-income households obtain a more nutritious diet by increasing their food purchasing power.<sup>1</sup> In 2021, federal spending for SNAP totaled a historic high of \$113.8 billion—reflecting greater need for assistance among vulnerable populations, as well as enhanced benefits, as the negative economic effects of the COVID-19 pandemic persisted.<sup>2</sup> In that year, approximately 12.5 percent of Americans, more than 41 million individuals, relied at least in part on SNAP to purchase food. According to the most recent available data, in 2019 most households receiving SNAP (81 percent) included either a child, an elderly individual (age 60 or older), or a non-elderly individual with a disability—such households received 86 percent of all SNAP benefits.<sup>3</sup>

USDA develops and maintains the Thrifty Food Plan (TFP) that determines SNAP benefits. The TFP is one of four USDA food plans designed to build a dietary plan that meets certain food group, energy,

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<sup>1</sup>7 U.S.C. § 2011.

<sup>2</sup>Jordan W. Jones, Saied Toossi, and Leslie Hodges, *The Food and Nutrition Assistance Landscape: Fiscal Year 2021 Annual Report*, EIB-237, U.S. Department of Agriculture, Economic Research Service (Washington, D.C.: June 2022).

<sup>3</sup>U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, *Characteristics of Supplemental Nutrition Assistance Program Households: Fiscal Year 2019* (Alexandria, Va., 2021).

and nutrient recommendations, as well as practicality and cost constraints, at different cost levels. As the name suggests, the TFP uses the lowest cost level; it serves as the basis for determining the maximum monthly SNAP benefit. The TFP is based on an underlying economic model developed by USDA. A computer program inputs food, price, and nutrition data into the model to create “Market Baskets”—that is, weekly amounts and costs from categories of foods and beverages in purchasable forms to support a healthy diet. The purpose of the TFP is to demonstrate how individuals in various age groups could purchase a healthy diet on a limited budget.<sup>4</sup>

In past years, there has been debate among researchers and advocates about whether the amounts SNAP households receive in benefits are adequate to address food insecurity, and whether and how the TFP could be better aligned with modern economic realities, such as higher food prices and less time to prepare food. The Agriculture Improvement Act of 2018 (2018 Farm Bill) established a new requirement for USDA to reevaluate the TFP by 2022 and at 5-year intervals thereafter.<sup>5</sup> In response, in 2021, USDA reevaluated the TFP for the first time in 15 years. Importantly, in the 2021 TFP reevaluation, USDA allowed the real cost of the TFP for a reference family of four to increase in order to reflect current dietary guidance and updated data on food prices, food composition, and consumption patterns, rather than prioritizing cost neutrality. Prior reevaluations increased costs only to account for inflation.

As a result of the 2021 TFP reevaluation, the cost of the TFP increased by 21 percent compared to the previous inflation-adjusted cost of the TFP. This was the first increase in the cost of the TFP, other than inflation adjustments, in 45 years.<sup>6</sup> SNAP spending is projected to increase by

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<sup>4</sup>The Thrifty Food Plan includes separate Market Baskets for 15 age-sex groups, but SNAP benefits are based on the Market Basket costs for a reference family of four (a man and a woman 20 to 50 years old, a child 6 to 8 years old, and a child 9 to 11 years old).

<sup>5</sup>Pub. L. No. 115-334, § 4002, 132 Stat. 4490, 4624.

<sup>6</sup>In March 2021, Congress extended a temporary 15 percent increase in benefits for all SNAP participants through September 2021; this increase expired September 30, 2021. GAO, *COVID-19: Continued Attention Needed to Enhance Federal Preparedness, Response, Service Delivery, and Program Integrity*, [GAO-21-551](#) (Washington, D.C.: July 19, 2021).



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\$250 to \$300 billion from 2022 to 2031, as a combined result of the 2021 TFP reevaluation and economic factors like inflation.<sup>7</sup>

You asked us to review the 2021 Thrifty Food Plan reevaluation.<sup>8</sup> This report examines (1) USDA's administrative process for reevaluating the Thrifty Food Plan in 2021 and the extent to which the process employed leading project management practices in planning the reevaluation; (2) the extent to which USDA gathered and analyzed external input to inform the 2021 Thrifty Food Plan reevaluation; and (3) how the methodology and results of the 2021 Thrifty Food Plan reevaluation compare to methodological standards.

To address our first objective, we reviewed project documentation provided by USDA and interviewed officials at the Food and Nutrition Service (FNS), the USDA office responsible for reevaluating the Thrifty Food Plan and administering the SNAP program at the federal level. We also interviewed or obtained written responses from officials from USDA's Office of the General Counsel and Office of Inspector General (OIG), and the Office of Management and Budget (OMB). We compared the information we collected to selected project planning practices in *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, which outlines how projects can achieve quality outcomes and satisfy stakeholder expectations, among other benefits.<sup>9</sup> The *PMBOK® Guide* is developed by the Project Management Institute, Inc., a not-for-profit association that provides global standards for, among other things,

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<sup>7</sup>The Congressional Budget Office (CBO) estimates that the combined effects of the reevaluation of the TFP and higher food prices will account for an increase of \$250 billion to \$300 billion over the 2022-2031 period in outlays for SNAP, relative to the July 2021 baseline. Congressional Budget Office, *The Cost of Eight Executive Actions Taken by the Biden Administration* (Washington, D.C.: June 22, 2022; updated June 23, 2022). Available at <https://www.cbo.gov/publication/58231>.

<sup>8</sup>GAO also received a Congressional request for a decision as to whether the 2021 TFP is a rule for purposes of the Congressional Review Act (CRA). GAO concluded that the 2021 TFP meets the definition of a rule under the CRA and is subject to the CRA requirement to submit the rule to Congress before it can take effect. See GAO, *United States Department of Agriculture—Applicability of the Congressional Review Act to the 2021 Updates to the Thrifty Food Plan*, B-333732 (Washington, D.C.: July 28, 2022).

<sup>9</sup>Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK® Guide) Sixth Edition* (2017). PMBOK is a trademark of Project Management Institute, Inc. We used this edition because it was current at the time of the 2021 TFP reevaluation. The Project Management Institute published the seventh edition in August 2021. The seventh edition explicitly notes that none of the changes negate processes outlined in prior editions.

project and program management.<sup>10</sup> The Project Management Institute defines the project management body of knowledge (PMBOK®) as a term that describes the knowledge within the profession of project management that includes proven traditional practices that are widely applied.<sup>11</sup> The *PMBOK® Guide* is a foundation upon which organizations can build methodologies, policies, procedures, rules, tools and techniques, and life cycle phases needed to practice project management.<sup>12</sup> We selected key project-planning practices out of the many outlined in the *PMBOK® Guide* after consulting an internal expert and identifying the practices most foundational to quality control and project success. We also determined that control activities related to the identification, analysis, and response to risk and change components of internal control were significant to this objective, along with the underlying principles that management should design control activities to achieve its objectives and respond to risks and implement control activities through policies.<sup>13</sup> We assessed how the agency responded to change in the context of the 2021 TFP reevaluation and the extent to which the agency's administrative process and project management activities included the identification and management of risks.

To address our second objective, we examined documentation, including literature reviews, academic articles, and transcripts of stakeholder discussions provided by USDA. We also interviewed FNS and Economic Research Service (ERS) officials.<sup>14</sup> We reviewed the ways USDA planned and used research to inform the reevaluation. We compared how USDA

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<sup>10</sup>GAO considers the standards and guidance outlined in the *PMBOK® Guide* as generally recognized, sound principles for managing various aspects of projects, programs, and portfolios. For other examples where GAO applied the *PMBOK® Guide* to assess an agency's practices, see: GAO, *Information Technology: Education Needs to Address Student Aid Modernization Weaknesses*, [GAO-23-105333](#) (Washington, D.C.: October 20, 2022); *Traffic Safety: Implementing Leading Practices Could Improve Management of Mandated Rulemakings and Reports*, [GAO-22-104635](#) (Washington, D.C.: April 26, 2022); and *Project Management: DOE and NNSA Should Improve Their Lessons-Learned Process for Capital Asset Projects*, [GAO-19-25](#) (Washington, D.C.: December 21, 2018).

<sup>11</sup>Project Management Institute, *PMBOK® Guide*, 1.

<sup>12</sup>Project Management Institute, *PMBOK® Guide*, 2.

<sup>13</sup>GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 2014).

<sup>14</sup>USDA's Economic Research Service (ERS) conducts research regarding agriculture, food, the environment, and rural America.

conducted the peer review for the TFP to USDA and OMB guidelines regarding peer review of influential information, and FNS's typical peer review practices for influential information.<sup>15</sup>

To address our third objective, we examined technical documentation provided by USDA, including data, internal memoranda, computer programming code, peer review comments from ERS and the Agricultural Research Service (ARS), and underlying analysis, where available; and interviewed officials from FNS and ERS.<sup>16</sup> We also interviewed outside researchers who have worked with or conducted research relevant to the Thrifty Food Plan and SNAP, as well as researchers who have worked to reproduce the TFP results. For the purpose of this report, we considered the reevaluation of the TFP an economic analysis.<sup>17</sup> We compared the information we gathered about the TFP to GAO's assessment methodology for economic analysis and USDA's Scientific Integrity Policy Handbook. We also determined that control activities related to information systems components of internal control were significant to this objective, along with the underlying principle that management should design control activities to achieve its objectives.<sup>18</sup> We assessed the reliability of data we received from FNS by reviewing related documentation and conducting interviews with knowledgeable officials and electronic data testing. We determined that these data were sufficiently reliable for the purposes of this objective. For more information on our scope and methodology, see appendix I.

We conducted this performance audit from September 2021 to December 2022 in accordance with generally accepted government auditing

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<sup>15</sup>Relevant USDA guidelines included USDA's Scientific Integrity standards (USDA, Office of the Chief Scientist. *Scientific Integrity*, Departmental Regulation DR 1074-001, November 18, 2016) and Scientific Integrity Policy Handbook (Guidance for Implementation of DR 1074-001). USDA's guidelines refer to OMB's guidelines for peer review. Office of Management and Budget, *Final Information Quality Bulletin for Peer Review*, 70 Fed. Reg. 2,664 (Jan. 14, 2005). We applied these guidelines to our review of FNS's peer review process for the TFP.

<sup>16</sup>The Agricultural Research Service (ARS) is USDA's chief scientific in-house research agency.

<sup>17</sup>GAO defines an economic analysis as an analysis that is intended to inform decision makers and stakeholders about the economic effects of an action. The TFP reevaluation is an example of one type of economic analysis: an analysis of the costs of a government program, project, or policy. GAO, *Assessment Methodology for Economic Analysis*, [GAO-18-151SP](#) (Washington, D.C.: Apr. 10, 2018).

<sup>18</sup>[GAO-14-704G](#).

standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## Background

The TFP is the lowest cost of four USDA Food Plans that describe how to eat a healthy diet that aligns with nutrition guidelines outlined in the *Dietary Guidelines for Americans* at different cost levels (see textbox).<sup>19</sup> In January 1975, the TFP replaced the previous Economy Food Plan, described at the time as “a restricted diet for emergency use with nutrients sufficient to meet the minimum needs of the body, but with little margin for safety.”<sup>20</sup> The TFP maintained the same cost level as the Economy Food Plan but was developed to better address the needs of individuals of different sexes and ages.<sup>21</sup> The cost of the TFP determines the SNAP maximum benefit allotment for households with no net income.<sup>22</sup> According to USDA, in 2019, 36 percent of SNAP households received the maximum benefit for their family size, meaning that they had no net income and the amount they received in SNAP benefits effectively represented their entire food budget. In addition, USDA estimates separate TFPs for Hawaii and the urban and rural parts of Alaska, as required in statute.<sup>23</sup>

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<sup>19</sup>The purpose of the *Dietary Guidelines for Americans*—which are updated and released by USDA and the Department of Health and Human Services every 5 years—is to provide advice on what to eat and drink to build a healthy diet that can promote health, help prevent disease, and meet nutrient needs.

<sup>20</sup>U.S. Department of Agriculture, Agricultural Research Service, *Family Food Plans and Costs: For nutritionists and other leaders who develop or use food plans*, Home Economics Research Report No. 20 (Washington, D.C.: Nov. 1962).

<sup>21</sup>Institute of Medicine and National Research Council, *Supplemental Nutrition Assistance Program: Examining the Evidence to Define Benefit Adequacy* (Washington, D.C.: The National Academies Press, 2013).

<sup>22</sup>A household’s net income is determined by subtracting certain amounts (e.g., a 20-percent earned income deduction and a dependent care deduction) from gross income.

<sup>23</sup>USDA was in the process of reevaluating the Alaska and Hawaii TFPs in 2022.

### U.S. Department of Agriculture's (USDA) Four Food Plans

USDA's **Thrifty Food Plan (TFP)** is one of four food plans, including the **Low-Cost, Moderate-Cost, and Liberal Food Plans**. The **Low-Cost, Moderate-Cost, and Liberal Food Plans** were developed by USDA in the 1930s and 1940s to provide consumers with practical advice on healthful eating. For each of the four food plans, USDA uses a mathematical model to generate Market Baskets at different cost levels. The cost levels of the USDA food plans other than the TFP were originally set based on individual food expenditures from a nationwide survey in the 1970s and have only been adjusted for inflation since then. The **Low-Cost Food Plan** was originally set to represent food expenditures in the second from the bottom quartile; the **Moderate-Cost Food Plan**, food expenditures in the second from the top quartile; and the **Liberal Food Plan**, food expenditures in the top quartile. These plans were last reevaluated in 2007.

The four food plans represent food types and amounts at different cost levels to support a healthy diet. Together, they inform research, education, and policy:

- The **TFP** is used as the basis for maximum SNAP allotments.
- Bankruptcy courts often use the value of the **Low-Cost Food Plan** to determine the portion of income of a person filing for bankruptcy to allocate to necessary food expenses.
- The Department of Defense uses the value of the **Liberal Food Plan** to determine the Basic Allowance for Subsistence rates for all service members.
- Many divorce courts use the values of the USDA Food Plans to set alimony payments.
- The **Low-Cost, Moderate-Cost, and Liberal Food Plans** are used in USDA's report, *Expenditures on Children by Families*, which is used by some states to help set state child support guidelines and foster care payments.

Source: GAO analysis of A. Carlson, M. Lino, and T. Fungwe, *The Low-Cost, Moderate-Cost, and Liberal Food Plans, 2007* (CNPP-20), U.S. Department of Agriculture, Center for Nutrition Policy and Promotion (2007). | GAO-23-105450

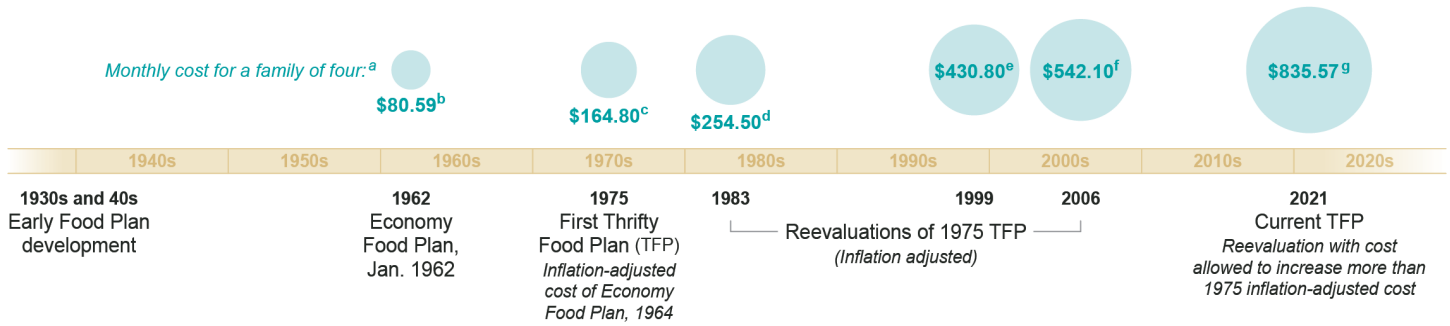
Prior to 2021, the TFP was reevaluated in 1983, 1999, and 2006 (see fig. 1). Between reevaluations, USDA adjusts the cost of the TFP each month to reflect inflation using the Consumer Price Index, but makes adjustments to SNAP benefits once a year.<sup>24</sup> By law, USDA's June Monthly Cost of Food Report determines the maximum SNAP benefit allotment for the following federal fiscal year beginning October 1. For example, the June 2022 monthly cost for the TFP (\$939.90) became the maximum SNAP benefit for a reference family of four in fiscal year 2023.<sup>25</sup>

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<sup>24</sup>Specifically, to account for changes in food prices, the costs of the Thrifty Food Plan Market Baskets for each age/sex group are updated monthly by using the Consumer Price Indexes (CPI). Each Market Basket Category of the Thrifty Food Plan is matched to one or more CPI (e.g., the Market Basket Category "eggs" is matched to the CPI for eggs and the Market Basket Category "dark-green vegetables" is matched to CPIs for fresh vegetables, frozen vegetables, and canned vegetables).

<sup>25</sup>U.S. Department of Agriculture, Food and Nutrition Service, *Official USDA Thrifty Food Plan: U.S. Average, June 2022* (Washington, D.C.: August 2022), accessed August 25, 2022, <https://www.fns.usda.gov/cnpp/usda-food-plans-cost-food-reports-monthly-reports>.

**Figure 1: Timeline of Selected USDA Food Plans and Thrifty Food Plan Reevaluations**



Source: GAO analysis of Thrifty Food Plan reports and other U.S. Department of Agriculture (USDA) publications. | GAO-23-105450

**Accessible Data for Figure 1: Timeline of Selected USDA Food Plans and Thrifty Food Plan Reevaluations**

Category	Monthly cost for a family of four: <sup>a</sup>
1930s and 40s: Early Food Plan development	
1962: Economy Food Plan, Jan. 1962	80.59 <sup>b</sup>
1975: First Thrifty Food Plan (TFP) Inflation-adjusted cost of Economy Food Plan, 1964	164.8 <sup>c</sup>
1983: Reevaluation of 1975 TFP (Inflation adjusted)	254.5 <sup>d</sup>
1999: Reevaluation of 1975 TFP (Inflation adjusted)	430.8 <sup>e</sup>
2006: Reevaluation of 1975 TFP (Inflation adjusted)	542.1 <sup>f</sup>
2021: Current TFP Reevaluation with cost allowed to increase more than 1975 inflation-adjusted cost	835.57 <sup>g</sup>

Source: GAO analysis of Thrifty Food Plan reports and other U.S. Department of Agriculture (USDA) publications. | GAO-23-105450

Notes:

<sup>a</sup>The cost of the TFP is calculated for a family of four, including a man and a woman between the ages of 20 and 50, one child between 9 and 11 years of age, and one child between 6 and 8 years of age.

<sup>b</sup>The source for the 1962 cost is *Family Food Plans and Food Costs: For nutritionists and other leaders who develop or use food plans*, Home Economics Research Report, No. 20, published by the U.S. Department of Agriculture's (USDA) Agricultural Research Service in November, 1962.

<sup>c</sup>Although the TFP was developed in 1975, it first began to affect Supplemental Nutrition Assistance Program (SNAP) benefits in 1976. Accordingly, the first cost of the TFP was published in the Cost of Food at Home tables included in the spring 1976 edition of the Family Economics Review (ARS-NE-36).

<sup>d</sup>The 1983 TFP and accompanying Cost of Food at Home tables were published in the January 1984 issue (No.1) of the Family Economics Review.

<sup>e</sup>The 1999 TFP was published in October 1999. USDA began publishing the Cost of Food at Home tables online in 1994. Accordingly, the cost of the TFP is taken from the October 1999 Cost of Food at Home at Four Levels tables, published in November 1999, available at <https://www.fns.usda.gov/sites/default/files/CostofFoodOct99.pdf>

<sup>f</sup>The 2006 TFP was published in April 2007. The cost shown here is from the June 2007 Cost of Food at Home at Four Levels tables, available at <https://www.fns.usda.gov/sites/default/files/CostofFoodJun07.pdf>

<sup>g</sup>The cost is included in the Thrifty Food Plan, 2021 report, published in August 2021.

The timing of TFP reevaluations was previously at the discretion of USDA, but the 2018 Farm Bill required the agency to update the TFP every 5 years going forward, with the first reevaluation due by 2022. In January 2021, in Executive Order 14002, the President directed all executive branch agencies to “identify actions they can take within existing authorities to address the current economic crisis resulting from the pandemic. Agencies should specifically consider actions that facilitate better use of data and other means to improve access to, reduce unnecessary barriers to, and improve coordination among programs

**The Food and Nutrition Act of 2008, as amended, defines the Thrifty Food Plan (TFP):**

“‘Thrifty food plan’ means the diet required to feed a family of four persons consisting of a man and a woman twenty through fifty, a child six through eight, and a child nine through eleven years of age, determined in accordance with the Secretary’s calculations [...] The cost of such diet shall be the basis for uniform allotments for all households [...]”

**The Agriculture Improvement Act of 2018 outlines the factors that must be considered in the reevaluation and the required timeline:**

“By 2022 and at 5-year intervals thereafter, the Secretary shall re-evaluate and publish the market baskets of the thrifty food plan based on current food prices, food composition data, consumption patterns, and dietary guidance.”

Source: 7 U.S.C. § 2012(u). | GAO-23-105450

funded in whole or in part by the Federal Government.”<sup>26</sup> The same day, the White House issued a fact sheet specifically citing the need to update the TFP to “better reflect the modern cost of a healthy basic diet.”<sup>27</sup>

The underlying method used to develop and reevaluate the TFP has remained similar since USDA published the first edition of the TFP. All versions of the TFP to date have used an economic model built from mathematical equations to represent a primary goal as well as constraints

<sup>26</sup>Executive Order 14002 of January 22, 2021, *Economic Relief Related to the COVID-19 Pandemic* (Washington, D.C.: Jan. 27, 2021), <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/22/executive-order-economic-relief-related-to-the-covid-19-pandemic/>.

<sup>27</sup>The White House, *Fact Sheet: President Biden’s New Executive Actions Deliver Economic Relief for American Families and Businesses Amid the COVID-19 Crises* (Washington, D.C.: Jan. 22, 2021), accessed December 10, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/22/fact-sheet-president-bidens-new-executive-actions-deliver-economic-relief-for-american-families-and-businesses-amid-the-covid-19-crises/>.

that the primary goal should satisfy.<sup>28</sup> The computer program that calculates the TFP generates results in the form of Market Baskets—that is, weekly amounts from categories of foods and beverages in purchasable forms to support a healthy diet. For the TFP, the program is set up to prioritize Market Baskets that contain categories of foods that are as close as possible to the diet of a sample of Americans while also satisfying other legal requirements, such as using current food prices (see fig. 2).<sup>29</sup> Because dietary and nutritional guidelines, food prices, and consumption patterns change over time, the composition of the Market Baskets changes each time the model is reevaluated with updated data.

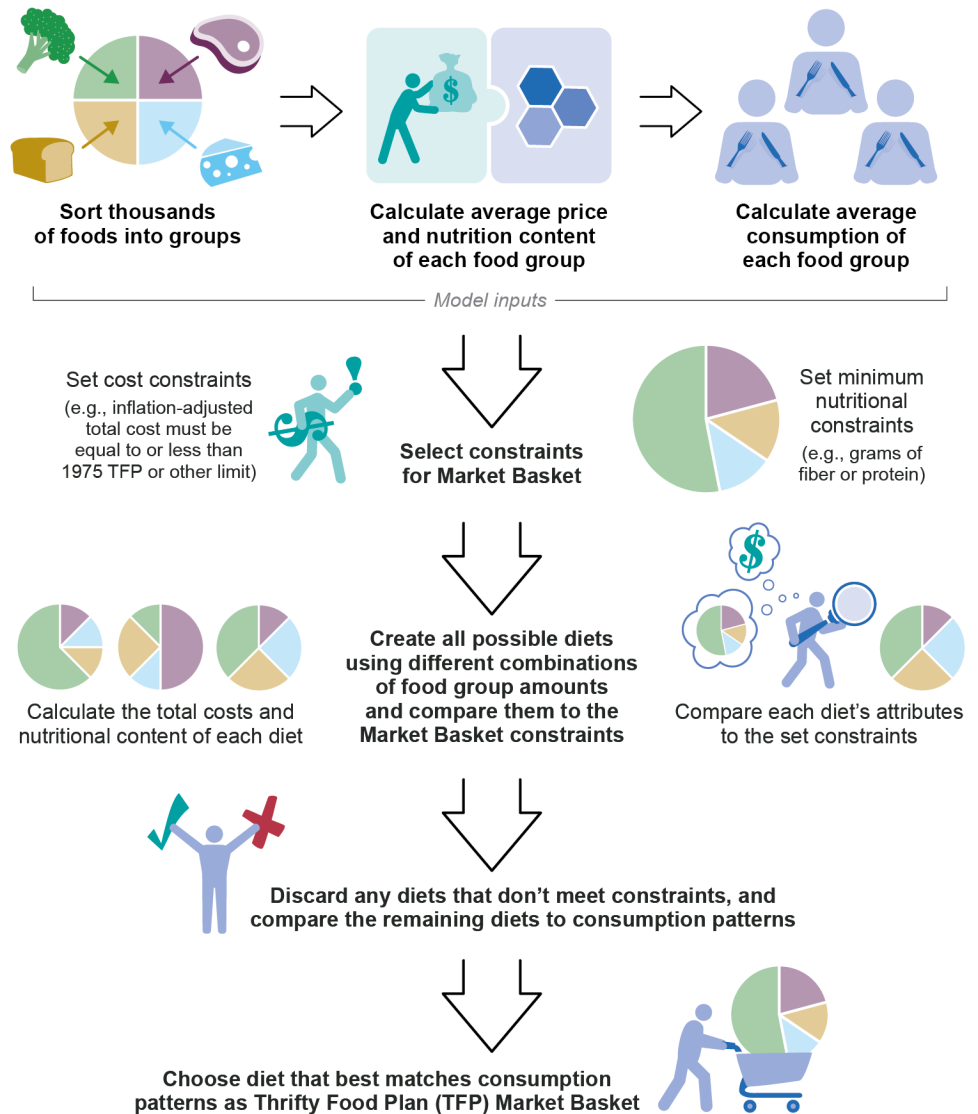
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<sup>28</sup>Formally, the TFP is a constrained optimization model that selects quantities of food categories—with foods and beverages in as-consumed forms. The model chooses quantities of the categories that minimize the objective function (a strictly convex, nonlinear function that minimizes the distance between the food categories and average consumption, weighted by expenditure share of each category) subject to dietary, practicality, and cost constraints. See page 65 of U.S. Department of Agriculture (USDA), *Thrifty Food Plan, 2021*, FNS-916 (August 2021). Throughout this report we use the term “primary goal” to refer to the objective function being minimized in the TFP mathematical model, but we also discuss other goals mentioned in the TFP report.

<sup>29</sup>The Agriculture Improvement Act of 2018 (2018 Farm Bill) established a new requirement for USDA to reevaluate the TFP every 5 years, “based on current food prices, food composition data, consumption patterns, and dietary guidance.” While past TFP updates also incorporated data on these four elements, the 2018 Farm Bill codified them in law and added the requirement for regular updates. See Pub. L. No. 115-334, § 4002, 132 Stat. 4490, 4624.



**Figure 2: Method for Thrifty Food Plan Reevaluation**



Source: GAO analysis of the Thrifty Food Plan, 2021 and documents from the U.S. Department of Agriculture. | GAO-23-105450

**Accessible Data for Figure 2: Method for Thrifty Food Plan Reevaluation**

**Model inputs**

- Sort thousands of foods into groups
  - Calculate average price and nutrition content of each food group
  - Calculate average consumption of each food group
1. Select constraints for Market Basket

- a. Set cost constraints (e.g., inflation-adjusted total cost must be equal to or less than 1975 TFP or other limit)
- b. Set minimum nutritional constraints (e.g., grams of fiber or protein)
2. Create all possible diets using different combinations of food group amounts and compare them to the Market Basket constraints
  - a. Calculate the total costs and nutritional content of each diet
  - b. Compare each diet's attributes to the set constraints
3. Discard any diets that don't meet constraints, and compare the remaining diets to consumption patterns
4. Choose diet that best matches consumption patterns as Thrifty Food Plan (TFP) Market Basket

Source: GAO analysis of the Thrifty Food Plan, 2021 and documents from the U.S. Department of Agriculture. | GAO-23-105450

Note: While the process is presented in this graphic linearly, according to the Thrifty Food Plan, 2021 report, the approach to creating the Thrifty Food Plan Market Baskets was more iterative. After completing initial phases of analysis, initial modeling results led to updates to the model's inputs and constraints.

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## USDA Began and Accelerated the 2021 Thrifty Food Plan Reevaluation without Key Project Management Elements in Place

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### Initial Agency Decisions Made the 2021 Reevaluation More Consequential and Introduced Risk

Early in 2021, USDA made decisions that made the Thrifty Food Plan (TFP) reevaluation more consequential than prior reevaluations and introduced risk. First, as previously discussed, USDA decided to allow the real cost of the TFP—and thus the value of SNAP benefits—to increase beyond inflation for the first time, thereby making the process more consequential. Unlike prior reevaluations, the result of the 2021 reevaluation would directly affect the real dollar amount of the SNAP benefits millions of Americans rely on to supplement their food budgets. USDA officials made this decision early on in the reevaluation process. USDA OGC officials said that prior to identifying potential changes to the cost of the TFP, FNS officials consulted with OGC to confirm that a cost increase would be consistent with relevant statutory language.<sup>30</sup> Ultimately, the 2021 TFP reevaluation resulted in a 21-percent increase

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<sup>30</sup>USDA OGC officials told us that holding costs constant during prior TFP reevaluations was an administrative decision made by the Secretary of Agriculture, not a legal requirement.

over the inflation-adjusted amount of the TFP from the last reevaluation in 2006.<sup>31</sup>

Second, USDA decided to accelerate the 2021 TFP reevaluation, which introduced risk, such as the risk of errors or not meeting objectives. According to internal documents, in April 2021, senior agency leadership decided to complete the reevaluation and publish the results by August 2021, which accelerated the timeline for completion by about 6 months. Whereas the TFP reevaluation team originally planned to allow 8 months for data analysis, the accelerated plan allowed for about 2.5 months, according to our analysis of project planning documents. The team initially proposed publishing results in February 2022 for an expedited delivery in response to the President's January 2021 Executive Order and accompanying fact sheet.<sup>32</sup> However, the agency decided to issue the report in August 2021 so that FNS could apply any resulting SNAP benefit increases on October 1, 2021, according to internal documents we reviewed. This deadline coincided with the expiration of a temporary COVID-19 pandemic-related increase to SNAP benefits.<sup>33</sup>

FNS officials said they met the accelerated October 1 deadline by making the TFP reevaluation a top priority in the agency. FNS officials said they hired additional staff, stopped work on other projects, and worked overtime. Additionally, FNS officials explained that because accelerating the timeline for the reevaluation was a top priority for the agency and the administration, the agency was able to complete a review of the final report more quickly than normal. Specifically, officials in USDA's OGC and the Office of the Secretary, among other offices, reviewed the report ahead of other products in the queue for clearance.

Notwithstanding these efforts, the decision to accelerate the project timeline meant that agency officials had to weigh whether and how to reduce or eliminate key steps in the reevaluation process, including steps

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<sup>31</sup>USDA, *Thrifty Food Plan, 2021*, 34. More specifically, the report states, "The cost of the Thrifty Food Plan, 2021 Market Baskets for the reference family of four—at June 2021 prices—is \$835.57 per month. Compared to the inflation-adjusted cost of the previous Thrifty Food Plan, 2006 at June 2021 prices, this represents an increase of 21.03 percent for the reference family of four."

<sup>32</sup>The 2018 Farm Bill states that a reevaluation needed to be completed by 2022. The reevaluation team indicated that prior to the April decision to accelerate the timeline, they expected to complete the TFP reevaluation in February 2022.

<sup>33</sup>The American Rescue Plan Act of 2021, enacted in March 2021, extended a temporary 15-percent increase in SNAP benefits from June 30 to September 30, 2021.

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intended to help ensure quality. As a result, the acceleration increased the potential risks to both the quality and success of the TFP reevaluation.

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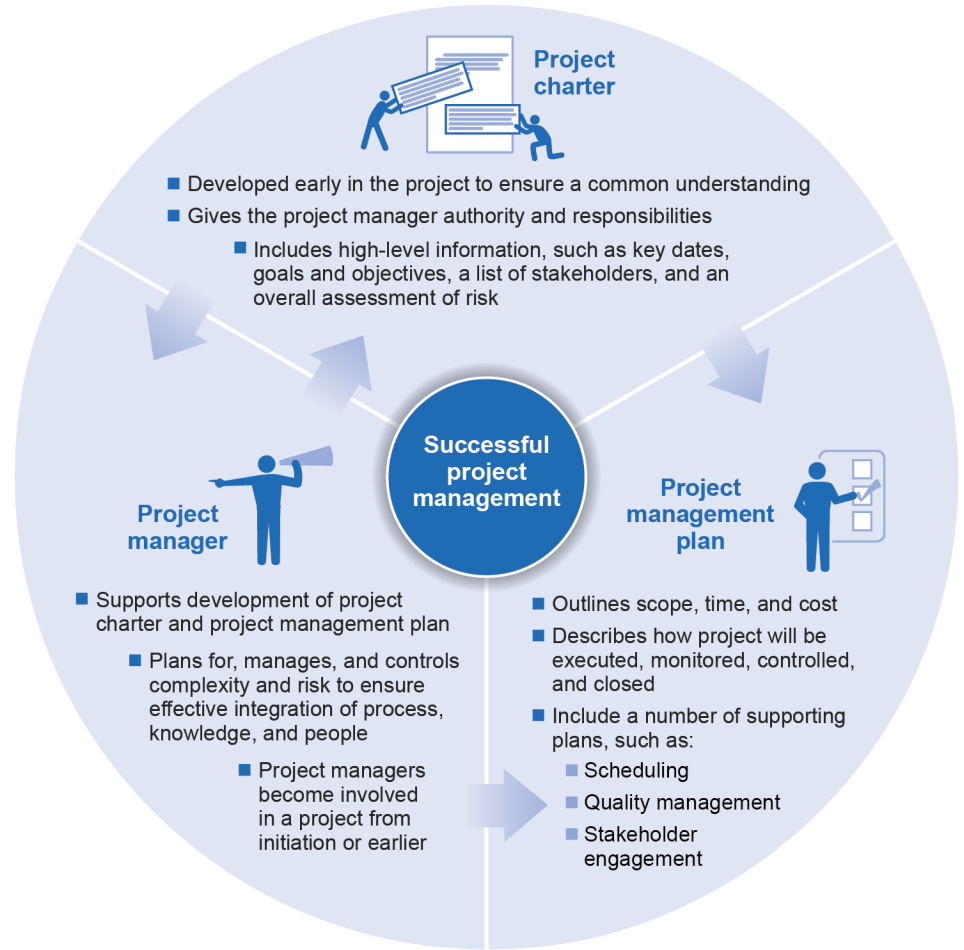
### USDA and FNS Began the TFP Reevaluation without Key Project Management Elements in Place

Despite the complexity and magnitude of the undertaking, USDA and FNS officials began the 2021 TFP reevaluation without key project management elements in place. According to the Project Management Institute's *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, following generally recognized practices in project management can increase the likelihood of a project's success by responding effectively to risk, enhancing project quality, satisfying stakeholder expectations, and increasing project predictability, among other benefits. We selected three key project planning practices out of the many outlined in the *PMBOK® Guide* as practices that are foundational to quality control and project success.<sup>34</sup> They include a project charter, a comprehensive project management plan, and a dedicated project manager (see fig. 3). All three elements can help identify and mitigate project risk, among other benefits.

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<sup>34</sup>These three elements are especially relevant in the initiating and planning phases of a project, according to the *PMBOK® Guide*. Project Management Institute, *PMBOK® Guide*, 25.

**Figure 3: Three Key Elements of Project Management**



Source: GAO analysis of "A Guide to the Project Management Body of Knowledge." | GAO-23-105450

**Accessible Data for Figure 3: Three Key Elements of Project Management**

**Project charter**

- Supports project manager and project management plan; Supported by project manager
- Developed early in the project to ensure a common understanding
- Gives the project manager authority and responsibilities
- Includes high-level information, such as key dates, goals and objectives, a list of stakeholders, and an overall assessment of risk

**Project manager**

- Supports development of project charter and project management plan
- Plans for, manages, and controls complexity and risk to ensure effective integration of process, knowledge, and people
- Project managers become involved in a project from initiation or earlier

Project management plan

- Supported by project charter and project manager
- Outlines scope, time, and cost
- Describes how project will be executed, monitored, controlled, and closed
- Include a number of supporting plans, such as:
  - Scheduling
  - Quality management
  - Stakeholder engagement

### Project Charter

USDA and FNS began the TFP reevaluation without a project charter to provide a roadmap for navigating the process. According to the *PMBOK® Guide*, a project charter documents high-level information about the project, such as key milestones, goals and measurable objectives, and a list of project stakeholders, among other components (see sidebar).<sup>35</sup> It should be developed early in the lifecycle of a project to ensure a common understanding of crucial deliverables and the roles and responsibilities of everyone involved.

FNS officials said it is not their standard practice to develop a project charter, and noted that prior TFP reevaluations did not include a project charter. They also said that the 2018 Farm Bill language pertinent to the TFP reevaluation was effectively their charter, as well as the relevant

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<sup>35</sup>According to the *PMBOK® Guide*, a stakeholder is an individual, group, or organization that may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project. Project stakeholders may be internal or external to the project, they may be actively involved, passively involved, or unaware of the project. Project Management Institute, *PMBOK® Guide*, 550.

language in the Food and Nutrition Act of 2008.<sup>36</sup> Federal law provides certain requirements for a reevaluation, such as requiring that it needs to be completed every 5 years and that it be based on current food prices, food composition data, consumption patterns, and dietary guidance. However, according to the *PMBOK® Guide*, a charter should be developed by the project manager or project sponsor in collaboration with key stakeholders and should include the measurable objectives for a successful TFP reevaluation. For example, a charter aligned to *PMBOK® Guide* standards, as well as Farm Bill requirements, could have been developed by USDA and FNS officials and could have included information like precisely how current food price data must be or how closely the Market Baskets must adhere to dietary guidance. Additionally, a charter aligned to *PMBOK® Guide* standards would define other high-level project requirements beyond the legal requirements, such as quality standards, expectations around project approval and communication, and other quantified and documented needs and expectations of key stakeholders.

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<sup>36</sup>The Food and Nutrition Act of 2008, as amended, states, “‘Thrifty food plan’ means the diet required to feed a family of four persons consisting of a man and a woman twenty through fifty, a child six through eight, and a child nine through eleven years of age, determined in accordance with the Secretary’s calculations. [...]The cost of such diet shall be the basis for uniform allotments for all households [...]” The 2018 Farm Bill states, “By 2022 and at 5-year intervals thereafter, the Secretary shall re-evaluate and publish the market baskets of the thrifty food plan based on current food prices, food composition data, consumption patterns, and dietary guidance.” 7 U.S.C. § 2012(u).



### Elements of a Project Charter

A proper project charter ensures common understanding among stakeholders about key deliverables and responsibilities, according to the Project Management Institute.

A charter contains high-level information about the project, such as:

- Project purpose
- Measurable project objectives and related success criteria
- High-level [project] requirements
- High-level project description, boundaries, and key deliverables
- Overall project risk
- Summary milestone schedule
- Preapproved financial resources
- Key stakeholder list
- Project approval requirements (such as what constitutes project success, who decides the project is successful, and who signs off on the project)
- Project exit criteria (such as what are the conditions to be met in order to close or to cancel the project or phase)
- Assigned project manager, responsibility, and authority level
- Name and authority of the sponsor and others authorizing the project charter

Source: GAO analysis of A Guide to the Project Management Body of Knowledge. | GAO-23-105450

A project charter should also include an overall assessment of project risk, according to the *PMBOK® Guide*; yet FNS officials did not document or conduct a risk assessment for the 2021 TFP reevaluation. FNS officials said they did not conduct a formal risk assessment because the process did not change SNAP program eligibility criteria or internal controls affecting SNAP program integrity; nonetheless, risks such as computational errors, project quality, and suboptimal outcomes were not addressed.<sup>37</sup> Identifying, analyzing, and responding to a variety of risks is a key project management practice according to the *PMBOK® Guide*.<sup>38</sup> The *PMBOK® Guide* also notes that unmanaged threats can lead to performance shortfalls or loss of reputation, among other issues. Risk should initially be addressed during the project-planning phase and monitored and managed as the project progresses, according to the guide.<sup>39</sup> Federal internal control standards similarly state that agencies should identify, analyze, and respond to risks related to achieving defined objectives, as well as significant changes that could impact their internal control system.<sup>40</sup> These standards further note that responding to change is critical to an effective internal control system and can often be overlooked or inadequately addressed in the normal course of operations.

Because USDA and FNS began the reevaluation without documenting key components of a charter, they missed an opportunity to identify threats to achieving their goals and criteria for measuring project success. Furthermore, FNS officials have said that they rely on their job descriptions and routine practices to make decisions about how to execute a reevaluation. However, to the extent that high-level project information—such as key goals—are not documented in a charter, FNS can lose critical institutional knowledge in the event of staff turnover.

FNS officials did not develop a comprehensive project management plan describing how the TFP reevaluation would be carried out. According to

<sup>37</sup>FNS officials also said FNS plans to conduct its next SNAP fraud risk assessment in Fiscal Year 2023 in accordance with GAO's *A Framework for Managing Fraud Risks in Federal Programs* and best practices.

<sup>38</sup>Project Management Institute, *PMBOK® Guide*, 395.

<sup>39</sup>Project Management Institute, *PMBOK® Guide*, 398.

<sup>40</sup>These are principles 7 and 9, respectively, in *Standards for Internal Control in the Federal Government*.



the *PMBOK® Guide*, such a plan outlines scope, time, and cost, and describes how the project will be executed, monitored, controlled, and closed. The guide further notes that project management plans include a number of supporting plans, such as plans for managing the schedule quality, and stakeholder engagement (see sidebar).

FNS officials said they did not have a comprehensive project management plan aligned to PMBOK® standards because the agency does not typically follow formal, trademarked project management practices. However, officials said they employed some generally recognized project management practices like meeting regularly with staff and senior leadership about progress to-date, decision points, roadblocks, and team needs. FNS officials also created a project schedule—one important project planning document according to the *PMBOK® Guide*—running from January 2021 to February 2022.<sup>41</sup> This document outlined numerous tasks necessary for completing the reevaluation, such as hiring an economist, and assigned those tasks to an office at USDA. Additionally, FNS officials said the project management practices they used for the TFP were similar to those used in prior TFP reevaluations, as well as the Dietary Guidelines for Americans.<sup>42</sup> Yet, other important project planning documents that we determined were relevant to the reevaluation process were missing. As previously noted, there was no initial assessment of project risk; accordingly, FNS did not develop and document a risk management plan. Other missing project management plans include the following:



<sup>41</sup>However, FNS did not provide a comparable project schedule for the revised timeline that concluded in August 2021. Rather, the schedule they provided for this revised timeline was higher-level and less comprehensive. For example, the revised project schedule did not specify to whom tasks were assigned, nor did they include activities relevant to the reevaluation, such as incorporating results from the literature review or conducting a peer review.

<sup>42</sup>Officials were not able to provide documentation of administrative and management practices for previous evaluations because, according to FNS officials, the documents were destroyed in accordance with USDA's document retention policy.

A project management plan describes how the project will be executed, monitored and controlled, and closed. The needs of the project determine which components of the project management plan are relevant. The plan integrates and consolidates all subsidiary management plans and baselines, including establishing:

- Scope management plan: How the scope will be defined, developed, monitored, controlled, and validated.
- Requirements management plan: How the [project] requirements will be analyzed, documented, and managed.
- Schedule management plan: The criteria and the activities for developing, monitoring, and controlling the schedule.
- Cost management plan: How costs will be planned, structured, and controlled.
- Quality management plan: How the organization's quality policies, methodologies, and standards will be implemented in the project.
- Resource management plan: Guidance on how project resources should be categorized, allocated, managed, and released.
- Communications management plan: How, when, and by whom information about the project will be administered and disseminated.
- Risk management plan: How the risk management activities will be structured and performed.
- Procurement management plan: How the project team will acquire goods and services from outside of the performing organization.
- Stakeholder engagement plan: How stakeholders will be engaged in project decisions and execution, according to their needs, interests, and impact.

Source: GAO analysis of *A Guide to the Project Management Body of Knowledge*. | GAO-23-105450

**Quality management plan.** FNS did not have a quality management plan outlining their process for incorporating the agency's policies on ensuring quality throughout the TFP reevaluation. According to the

*PMBOK® Guide*, this plan should identify quality requirements and standards, and document how the project will demonstrate compliance with these standards. In a written response in May 2022, FNS officials said they applied the quality assurance standards outlined in the USDA Scientific Integrity Policy Handbook to the TFP reevaluation, among other standards. However, FNS did not provide documentation outlining how the reevaluation team complied with these standards throughout the reevaluation. For example, FNS officials did not provide a checklist outlining which quality assurance standards applied to the TFP reevaluation and when specific quality assurance steps would be conducted. Moreover, when asked about applicable quality standards in an earlier interview, members of the reevaluation team did not identify any written USDA policy or guidance describing a quality assurance framework applicable to the TFP reevaluation, including USDA's Scientific Integrity Policy Handbook. In the absence of a quality management plan, the reevaluation team lacked awareness of and written guidance about which quality assurance steps were essential to the reevaluation and could not be eliminated, even under an accelerated timeline.

**Stakeholder engagement plan.** Although FNS officials described stakeholder input as one of their primary means for ensuring a quality reevaluation, FNS did not create a stakeholder engagement plan. According to the *PMBOK® Guide*, a stakeholder is an individual, group, or organization that may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project. A stakeholder engagement plan identifies the strategies and actions necessary to promote productive involvement of stakeholders in project decision making and execution.<sup>43</sup> FNS officials told us, and internal documents we reviewed confirmed, that they engaged numerous internal and external stakeholders throughout the reevaluation process. For example, internally, FNS consulted with USDA's OGC and Economic Research Service (ERS) (see fig. 4), while externally, FNS briefed Office of Management and Budget (OMB) officials and convened a roundtable of

<sup>43</sup>Project Management Institute, *PMBOK® Guide*, 522.

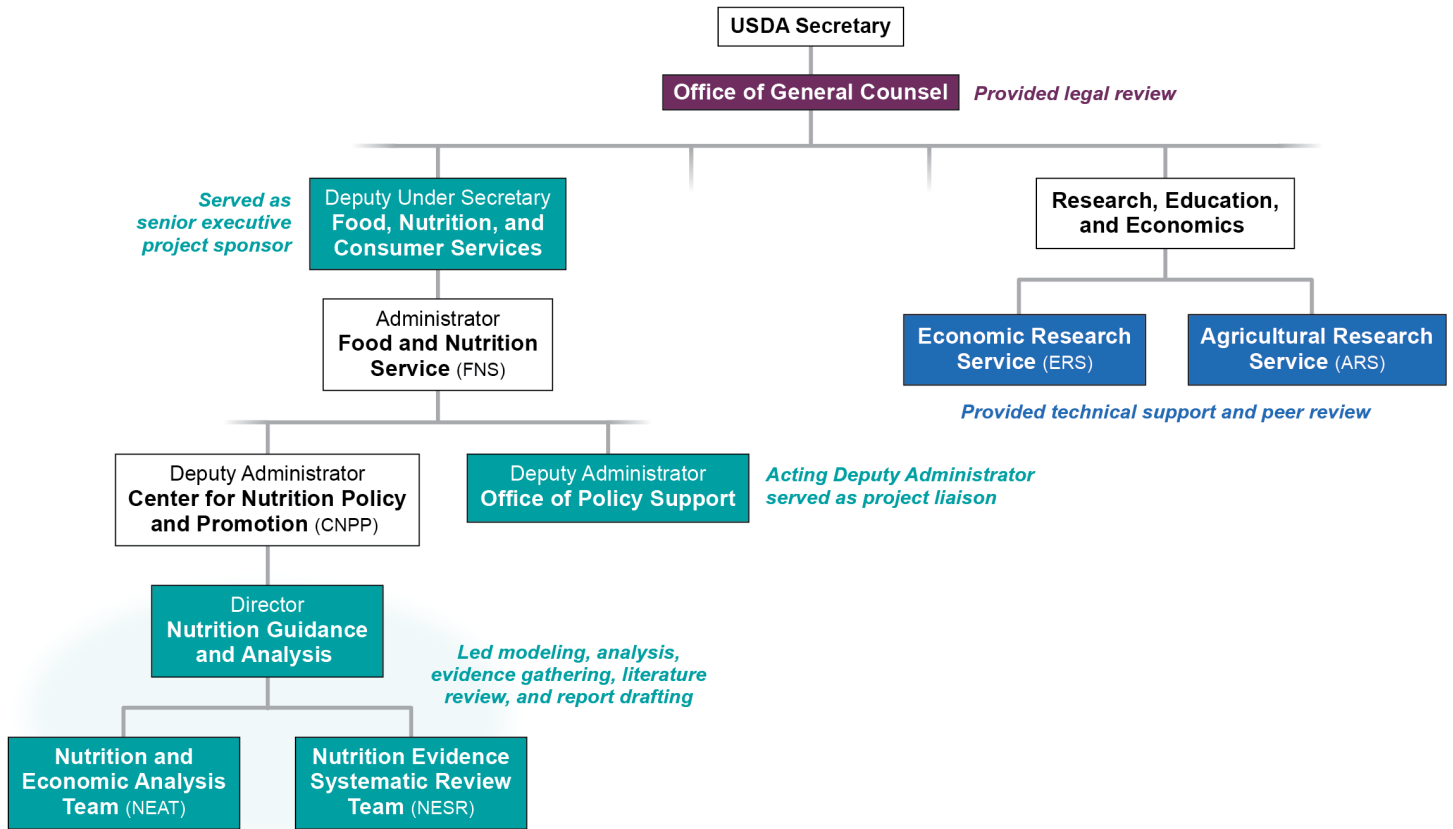
academic subject matter experts.<sup>44</sup> FNS officials provided us with USDA departmental guidance that outlined the involvement of certain stakeholders, like the USDA Office of Communications, during the final report publication and clearance phase of the process. However, the guidance is not specific to FNS or the TFP, or inclusive of all stakeholders that should be involved in the reevaluation.<sup>45</sup> FNS did not otherwise create or document a plan at the outset of the reevaluation identifying the stakeholders who should be included in the reevaluation and their respective roles. As a result, we were unable to evaluate whether FNS involved all appropriate stakeholders in the process, and there were few controls in place to ensure stakeholder input was properly considered.

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<sup>44</sup>FNS officials said they briefed OMB during the 2021 TFP reevaluation on multiple occasions regarding various methodological decisions. OMB officials confirmed they were briefed throughout the reevaluation. OMB officials said they provided feedback related to modeling and other elements, but noted that they did not review the code of the model.

<sup>45</sup>Specifically, FNS provided a Departmental Regulation on “Publications Review and Clearance Policy,” which broadly outlines policies, procedures, and standards related to the planning, preparation, coordination, clearance, and control of agency publications.

**Figure 4: Key USDA Offices and Individuals Involved in 2021 Thrifty Food Plan Evaluation**



Source: GAO analysis of U.S. Department of Agriculture (USDA) documents. | GAO-23-105450

**Accessible Data for Figure 4: Key USDA Offices and Individuals Involved in 2021 Thrifty Food Plan Evaluation**

**USDA Secretary**

- Office of General Counsel (Provided legal review)
  - Deputy Under Secretary Food, Nutrition, and Consumer Services (Served as senior executive project sponsor)
    - Administrator Food and Nutrition Service (FNS)
      - Deputy Administrator Office of Policy Support (Acting Deputy Administrator served as project liaison)
      - Deputy Administrator Center for Nutrition Policy and Promotion (CNPP)
        - Director Nutrition Guidance and Analysis (Led modeling, analysis, evidence gathering, literature review, and report drafting)
          - Nutrition and Economic Analysis Team (NEAT)
          - Nutrition Evidence Systematic Review Team (NESR)
  - Research, Education, and Economics
    - Economic Research Service (ERS) Provided technical support and peer review

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- Agricultural Research Service (ARS)

Source: GAO analysis of U.S. Department of Agriculture (USDA) documents. | GAO-23-105450

Note: A recent FNS reorganization has reclassified the Nutrition and Economic Analysis Team as a branch called the “Nutrition and Economic Analysis Branch.”

### Project Manager

FNS did not have a dedicated project manager to lead the 2021 TFP reevaluation. A project manager plays a critical role in the leadership of the project team in order to achieve the project’s objectives, according to the *PMBOK® Guide*. The guide notes that the project charter should assign a project manager and document the manager’s responsibilities. It further notes that the project manager should be involved at project initiation, or earlier. Additionally, the project manager can assist with assessing and managing risk, ensuring project quality, and drafting project documentation, including a charter and project management plan.

In lieu of a dedicated project manager, FNS officials said senior-level leaders took a team approach to managing the reevaluation process. FNS officials also said that in mid-March 2021, a senior leader from within FNS—specifically, a senior leader from the Office of Policy Support (see fig. 4)—served as a temporary project liaison. Senior agency officials said they assigned the liaison in light of the accelerated timeline to provide additional resources for the team and to lead coordination across departments. However, the *PMBOK® Guide* notes that the role of a project manager is distinct from that of a functional manager that provides management oversight for a business unit, or in this case, a senior agency leader. Moreover, FNS officials noted that they did not have a dedicated project manager for the reevaluations of the separate Thrifty Food Plans for Alaska and Hawaii that were underway at the time of our review.

FNS officials told us they planned to hire a program analyst to help manage projects and additional staffing with project management training for future TFP reevaluations. A June 2022 job posting for a technical advisor position states that qualifications must include project management skills. However, this technical advisor is also responsible for overseeing the development and promotion of two other large and complex nutrition projects—including the Dietary Guidelines for

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Americans—which, like the TFP, are updated every 5 years.<sup>46</sup> As a result, it is not clear whether this advisor will be able to maintain a dedicated focus on managing TFP reevaluations.

Because USDA and FNS did not employ a dedicated project manager, there was no one ensuring that key practices in project management were generally followed during the course of the reevaluation. Additionally, without a dedicated project manager, there was no staff member who maintained a committed focus on executing and controlling the project according to quality standards, as well as assessing and managing project risk. Finally, a project manager could have assisted FNS with developing key project documents, such as a charter or project management plan. The absence of such planning documents makes it difficult for an independent entity to evaluate FNS's performance in conducting the reevaluation.<sup>47</sup>

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## USDA Gathered External Input for the Thrifty Food Plan Reevaluation but Its Approach to Peer Review Had Limitations

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### USDA Gathered Information Relevant to the Reevaluation in Three Ways

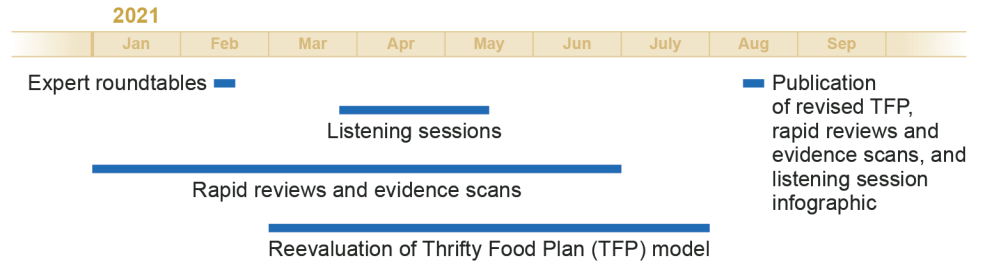
Officials from USDA's FNS gathered information for the 2021 TFP reevaluation from external sources in three primary ways: by conducting expert roundtables, reviewing academic literature, and holding listening sessions with outside stakeholders. FNS senior leaders stated that this information was to provide context for the reevaluation rather than to formally inform the methodology. Internal documents indicate the reevaluation team originally planned to formally incorporate some of this information, but did not ultimately do so. The decision to accelerate the timeline resulted in FNS gathering much of this information in parallel to, rather than in advance of, the TFP reevaluation process (see fig. 5).

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<sup>46</sup>As previously noted, historically, the TFP has not been updated every 5 years. However, going forward, the reevaluation will occur every 5 years as required by the 2018 Farm Bill.

<sup>47</sup>Principle 3.10 in *Standards for Internal Control in the Federal Government* states that effective documentation of internal control provides a means to communicate organizational knowledge as needed to external parties, such as external auditors.

**Figure 5: Timeline of Information Gathering for the 2021 Thrifty Food Plan Reevaluation**



Source: U.S. Department of Agriculture (USDA) officials and GAO analysis of USDA documents. | GAO-23-105450

**Accessible Data for Figure 5: Timeline of Information Gathering for the 2021 Thrifty Food Plan Reevaluation**

- Jan. 2021 to July 2021: Rapid reviews and evidence scans
- Feb. 2021: Expert roundtables
- March 2021 to Aug. 2021: Reevaluation of Thrifty Food Plan (TFP) model
- March 2021 to May 2021: Listening sessions
- Aug. 2021: Publication of revised TFP, rapid reviews and evidence scans, and listening session infographic

Source: U.S. Department of Agriculture (USDA) officials and GAO analysis of USDA documents. | GAO-23-105450

Expert Roundtables

Prior to beginning the reevaluation, FNS held two expert roundtables with academic and other researchers in February 2021 to gather suggestions for how the TFP could be improved. According to agency officials, FNS did not have a formal selection process for roundtable participants, but sought to include internal experts on SNAP and the TFP as well as external experts that represented a range of viewpoints. Topics covered at the two roundtables included the extent to which the TFP could be modified to improve the adequacy of SNAP benefits and consider issues such as geographic variation in food prices, time associated with preparing nutritious meals for at-home consumption, diverse cultural food practices, and food waste, among other issues. Additionally, the experts noted the political sensitivity of the TFP reevaluation and the need to methodically test how different assumptions and constraints affected the

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content of the Market Baskets and whether the results ultimately made sense for SNAP recipients.<sup>48</sup>

### Literature Reviews

FNS conducted and published four rapid reviews and one evidence scan to support the TFP reevaluation.<sup>49</sup> For example, the 2021 TFP report states that the rapid reviews supported the decision to use data on consumption patterns from households across all income levels, as opposed to data from low-income households as had been done in prior TFP reevaluations. We assessed the rapid reviews and evidence scan as compared to the standards for systematic review provided by FNS. We found the rapid reviews and evidence scan were thorough, well-documented, and appropriate from a social science perspective, given the need for making evidence-based decisions on a timeline shorter than the 1 to 2 years typically needed for the completion of a systematic review. The literature gathered through this effort generally supported the idea that there is a positive relationship between increased income and healthier diets, among other findings (see text box).

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<sup>48</sup>The methodical testing of how changing the assumptions and constraints of an economic model affects the results is commonly known as sensitivity analysis. Additional testing of whether the final Market Basket would be practical and palatable for SNAP families was referred to variously as “ground-truthing,” “menu testing,” and “ground testing” in USDA documentation.

<sup>49</sup>Specifically, the Nutrition Evidence Systematic Review (NESR) team within CNPP conducted the published rapid reviews and evidence scan. For brevity, we refer to these reviews and scans generally as literature reviews. According to NESR, a rapid review is a type of literature review in which the methods of a more in-depth literature review are modified or streamlined to produce results in a timely and cost-effective manner. Although systematic review methods are modified to expedite the process, a rapid review is still characterized by systematic and rigorous methods. In contrast, according to NESR, evidence scans are an effort to search and then characterize the body of literature in a subject area without looking at specific findings in order to provide objective data on the volume and characteristics of research available on a topic or question.



**Selected Findings from U.S. Department of Agriculture's (USDA) *Income, Cost, Time, and Convenience of Food: A Series of Rapid Reviews and Evidence Scans***

USDA used four rapid reviews and an evidence scan to examine literature related to income, food prices, diet costs, time spent on food-at-home-related activities, convenience foods, and diet quality as measured by the Healthy Eating Index (HEI). The HEI is a measure of diet quality used to assess how well a set of foods aligns with key recommendations of the [Dietary Guidelines for Americans](#).

- Evidence suggests lower income or greater poverty is correlated with lower HEI scores.
- Evidence suggests a relationship between higher total expenditures of food purchases and higher HEI scores.
- A small but consistent body of evidence suggests that those who participate in the Supplemental Nutrition Assistance Program (SNAP), compared to those who do not participate in SNAP, spend significantly more time on food-at-home-related activities such as shopping and food preparation.
- Limitations: The team that conducted the reviews and evidence scan identified certain limitations in the design and implementation of many included studies that impact the validity of the reported results. In addition, nutrition research in general has the limitation of generally being based on self-reported data regarding food intake, which is often underreported or inaccurately remembered in studies relying on participants' recall of what they ate.

Source: GAO analysis of USDA's *Income, Cost, Time, and Convenience of Food: A Series of Rapid Reviews and Evidence Scans*. | GAO-23-105450

The rapid reviews and evidence scan were originally developed around specific information needs for reevaluating the TFP, but because of the accelerated timeline, FNS was not able to fully leverage the information from these literature reviews. Internal FNS documents indicate that the reevaluation team originally sought answers to specific questions from the literature reviews and planned to use the information collected to support evidence-based methodological decisions and to inform specific aspects of the data analysis. For instance, FNS staff had questions concerning the relationship between income and time spent on activities such as food shopping and preparation, and access to convenience foods. FNS staff planned for literature review information to inform menu testing—that is, the development of menus and recipes that adequately consider the time use patterns of diverse low-income populations. However, the literature reviews were still in progress at the start of the recalculation of the TFP. Additionally, the activities or decisions that the literature reviews might have informed, such as ground testing, did not occur. Instead, the results of the literature reviews were published in August 2021, at the same time as the TFP report.<sup>50</sup> Consequently, FNS officials stated in interviews that these reviews were used mainly for context and not as a direct input to the TFP reevaluation process.

<sup>50</sup>U.S. Department of Agriculture, Food and Nutrition Service, Center for Nutrition Policy and Promotion, Nutrition Evidence Systematic Review Team, *Income, Cost, Time, and Convenience of Food: A Series of Rapid Reviews and Evidence Scans* (Alexandria, Va.: August 2021). Available at: <https://nesr.usda.gov/usda-food-plans-rapid-reviews-and-evidence-scans>.

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## Listening Sessions

FNS conducted a series of four listening sessions in March through May 2021 with SNAP participants, as well as local and national advocates, researchers, and state and local government representatives to gather diverse insights on the TFP. FNS published an infographic about the listening sessions in August 2021.<sup>51</sup> Officials stated that the information from the listening sessions helped the reevaluation team think about the reevaluation and shaped their understanding of the lived experiences of people who interact with their programs.

FNS officials recognized the need for additional research to inform future TFP evaluations. FNS officials said they planned to continue analyzing both external research and the transcripts of the listening sessions and roundtables, and that some of the areas of research necessary to inform methodological updates to the TFP could take years. A March 2022 USDA Learning Agenda stated the need to continue building evidence to support the TFP, and the agency requested \$2.5 million in the fiscal year 2023 budget to conduct research supporting the TFP, as well as an additional \$18 million to evaluate the impact of the TFP. FNS officials provided us with draft research plans that called for additional research, such as convening an expert panel to identify alternative approaches to reevaluating the TFP, including alternative models or methodologies; as well as examining how the value of the TFP differs across regions of the country and in rural and urban settings.

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## USDA's Limited Approach to Peer Review Did Not Fully Reflect the Importance of the TFP

USDA officials stated that peer review was an important part of ensuring quality for the 2021 TFP reevaluation, but modified the plan for peer review during the reevaluation. Internal documents from February 2021 indicate that the TFP reevaluation team initially planned to have a formal, external peer review for the TFP within their original proposed timeline. As previously noted, USDA senior leadership decided in mid-April 2021 to

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<sup>51</sup>While the published infographic regarding the listening sessions states that FNS hosted five listening sessions, only four sessions took place. FNS officials said that they scheduled a listening session for retailers and the food industry but no representatives attended the session. See U.S. Department of Agriculture, Food and Nutrition Service, *You Spoke We Listened: USDA Asks for Feedback About Updating SNAP Benefit Levels* (August 2021). Available at <https://www.fns.usda.gov/snap/ftp-you-spoke-we-listened>.

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accelerate the reevaluation timeline by 6 months in order to publish the reevaluated TFP and updated cost by August 2021. As a result,

**Adequacy of Peer Reviews for Influential Scientific Information:**

According to U.S. Department of Agriculture (USDA) guidelines, before releasing influential scientific information, USDA agencies and offices will use one or more of the following procedures:

1. Conduct a peer review that meets the standards recommended by the OMB Bulletin.
2. Confirm that the information to be released has been peer reviewed by a reputable scientific or professional journal, and the journal has agreed to publish the same information.
3. Conduct an internal review, which for the purposes of establishing transparency, ensures that the report or research product clearly states what the information and data are, how they were obtained, and any reservations or limitations on their use.

**Peer Review Agenda:** Agencies shall clear peer review agendas for influential scientific information and highly influential scientific assessments through agency heads and inform policy officials within the mission area prior to the agendas being made public. Each agency shall post on its website, and link to the department's website, an agenda of peer review plans for influential scientific information and highly influential scientific assessments.

**Public Participation and Comment:**

Agencies shall establish a transparent process for public disclosure of peer review planning related to influential scientific information and highly influential scientific assessments, including a web-accessible description of the peer review plan that the agency has developed for each of its forthcoming influential scientific disseminations.

Source: GAO analysis of *USDA Peer Review Implementation Guidelines*. | GAO-23-105450

according to internal documents we reviewed, in May 2021, FNS officials determined that they did not have time for a formal peer review and would focus instead on scientific collaboration with the Economic Research Service (ERS) and the Agricultural Research Service (ARS).

FNS officials stated that the TFP met the relevant USDA and OMB standards for peer review for influential information. Specifically, USDA's Office of the Chief Information Officer set out broad agency standards for information quality based on OMB guidelines, and USDA's Scientific Integrity Policy Handbook also refers to OMB guidelines in its discussion of peer review (see textbox). Together, these standards and OMB guidelines lay out parameters for peer review of influential information. OMB's guidelines state that "influential," when used in the phrase "influential scientific, financial, or statistical information," means that the agency can reasonably determine that dissemination of the information will have or does have a clear and substantial impact on important public policies or important private sector decisions.<sup>52</sup> FNS officials stated that they consider the TFP report to be influential information. USDA's Scientific Integrity Policy Handbook states that, before releasing influential scientific research information, USDA agencies and offices should use one or more of the following procedures to help ensure quality: (1) conduct a peer review that meets OMB standards, (2) confirm that the information has been peer reviewed by a reputable scientific or professional journal, or (3) conduct an internal review that, for the purposes of establishing transparency, ensures that the report or research product clearly states what the information and data are, how they were obtained, and any reservations or limitations on their use.

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<sup>52</sup>67 Fed. Reg. 8,452 (Feb. 22, 2002).

**Selected Excerpts from Office of Management and Budget (OMB) Final Information Quality Bulletin for Peer Review (2005)**

**Section II: Peer Review of Influential Scientific Information**

**In General:** “Peer reviewers shall be charged with reviewing scientific and technical matters, leaving policy determinations for the agency. Reviewers shall be informed of applicable access, objectivity, reproducibility and other quality standards under the Federal laws governing information access and quality.”

**Independence:** “Peer reviewers shall not have participated in development of the work product.”

**Choice of Peer Review Mechanism:** “The choice of a peer review mechanism (for example, letter reviews or ad hoc panels) for influential scientific information shall be based on the novelty and complexity of the information to be reviewed, [and] the importance of the information to decision making.”

**Transparency:** “The agency—or entity managing the peer review—shall instruct peer reviewers to prepare a report that describes the nature of their review and their findings and conclusions. [...] The agency shall disclose the names of the reviewers and their organizational affiliations in the report. Reviewers shall be notified in advance regarding the extent of disclosure and attribution planned by the agency. The agency shall disseminate the final peer review report on the agency’s Web site along with all materials related to the peer review (any charge statement, the peer review report, and any agency response).”

**Section V: Peer Review Planning**

“Each agency shall post on its Web site, and update at least every six months, an agenda of peer review plans. The agenda shall describe all planned and ongoing influential scientific information subject to this Bulletin.”

Source: Office of Management and Budget, *Final Information Quality Bulletin for Peer Review*, 70 Fed. Reg. 2664 (Jan.14, 2005). | GAO-23-105450

While agencies have discretion to determine the appropriate mechanisms for peer review of influential information, the introduction to OMB’s Bulletin for Peer Review cites a National Academy of Public Administration recommendation that the intensity of peer review should be commensurate with the significance of the information being disseminated and the likely implications for policy decisions. Although agencies can consider the trade-offs between the depth of review and timeliness, according to OMB, the need for rigorous peer review is greater when the information contains precedent-setting methods or models, presents conclusions that are likely to change prevailing practices, or is likely to affect policy decisions that have a significant impact.

Officials said that USDA engaged in activities that they considered to constitute peer review and internal review of the TFP. The officials considered the February 2021 expert roundtables (conducted prior to the start of the technical reevaluation) as part of their review process, along with regular engagement among colleagues at FNS, ERS, and ARS regarding specific methods, data, and questions. Lastly, they noted that in June 2021, ERS and ARS provided a formal peer review of the methods used for the TFP reevaluation. However, FNS’s approach to peer review for the TFP had some key limitations.

**Lack of transparency and documentation.** FNS did not document its peer review plans or the results of the peer review of the TFP, although both OMB and USDA guidelines require agencies to publish such documents for influential scientific information. Specifically, OMB’s Bulletin for Peer Review states that each agency should post

on its website all planned and ongoing peer reviews for influential scientific information, as well as post a copy of all final peer review reports, including the agency's response to peer reviewers; USDA's Peer Review Implementation Guidelines have a similar requirement.<sup>53</sup> In addition to not publicly documenting the results of the peer review of the TFP, FNS also did not confirm with stakeholders that their comments were accurately reflected before publishing the TFP report, according to our interviews with ERS officials and review of internal documents. By contrast, in 2022, FNS published six peer review plans for studies designated by the agency as influential; in 2021, they published four completed studies with documented peer review plans.<sup>54</sup> These plans included strategies to ensure the incorporation and disposition of peer review comments. Officials stated that not publishing a peer review plan for the TFP reevaluation was an oversight and they plan to document and publish peer review plans for the TFP in the future.

**Lack of independence.** FNS used internal reviewers for the TFP, although the agency has frequently used external peer reviewers for other studies they determined to be influential. During the TFP reevaluation process, FNS relied on early and frequent collaboration with ERS and ARS. For example, the reevaluation team consulted ARS regarding appropriate adjustments to nutrient constraints and ERS participated in preparing the food price data used in the TFP, gave methodological suggestions during the expert roundtable, and consulted on technical questions. Some of the same officials who assisted the reevaluation team were then asked to peer review the methodology section of the report. OMB's Peer Review Bulletin states that peer reviewers shall not have participated in development of the work product. However, OMB notes that for peer review of some documents, a broader view of independence is necessary to assure credibility of the process. In those cases, reviewers are generally not employed by the agency or office producing the document. In contrast to the approach FNS took for the TFP, for three of the four influential studies FNS published in 2021, the agency tasked contractors or

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<sup>53</sup>USDA Peer Review Implementation Guidelines, accessed May 22, 2022, available at [https://www.usda.gov/sites/default/files/documents/USDA\\_Peer\\_Review\\_Guidelines.doc](https://www.usda.gov/sites/default/files/documents/USDA_Peer_Review_Guidelines.doc).

<sup>54</sup>The four FNS studies in 2021 for which peer review plans were published covered smaller programs with combined total annual budgets in 2021 of approximately \$19.5 billion. (This includes the Summer Food Service Program, but excludes the National School Lunch Program.) The total spending on these programs is less than two-thirds of the projected \$25 to \$30 billion increase in annual SNAP benefits attributable to the 2021 TFP revision and higher food prices.

other parties with selecting external peer reviewers based on specific expertise. For instance, FNS used external peer reviewers for the Third National Survey of WIC Participants (2021 WIC study), which was not directly linked to federal spending, as is the case for the TFP.<sup>55</sup>

**Narrow scope and lack of instructions to reviewers.** In addition, FNS asked internal reviewers to review just the methodology section of the TFP report, whereas FNS tasked peer reviewers for other influential studies with a more comprehensive review. In essence, the designated peer reviewers for the TFP provided a technical review of the methodology section, but they did not see the other sections of the report or the results of the analysis until it was published and therefore could not comment on the overall strengths and limitations of the report. FNS senior officials said their clearance process provided for a review of the other report sections; however, internal agency clearance reviews are not typically considered peer reviews.<sup>56</sup> Other published FNS peer review plans for influential studies, such as the 2021 WIC study, instructed reviewers to carry out a comprehensive review, including “evaluating the clarity of hypotheses, the robustness of the methods employed to address the hypotheses, the appropriateness of the methods for the hypotheses being tested, the extent to which the conclusions follow from the analysis, and the strengths and limitations of the overall conclusions.” According to internal documents we reviewed, no such instructions were provided to the reviewers of the TFP.

In addition, it is unclear whether FNS fully considered both the importance of the TFP and OMB guidance when deciding upon its review process. The OMB Peer Review Bulletin requires a more rigorous form of peer review for “highly influential scientific assessments.” A scientific assessment is considered “highly influential” if the agency or the Office of Information and Regulatory Affairs Administrator determines that the

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<sup>55</sup>We selected this study as a comparison point because it was also published by FNS in 2021 and was designated as influential information. See A. Magness, et al., *Third National Survey of WIC Participants (NSWP-III): Brief Reports 1-10*, prepared by Capital Consulting Corporation and 2M Research Services for the U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, contract No. AG-3198-K-15-0077 (Alexandria, Va.: 2021). Available online at: [www.fns.usda.gov/research-and-analysis](http://www.fns.usda.gov/research-and-analysis).

<sup>56</sup>For example, ERS’s publishing guidelines distinguish between peer review and clearance review and note that, “Clearance focuses primarily on policy sensitivity, effective communication, and neutrality of language and follows an established process.” U.S. Department of Agriculture, Economic Research Service, Publishing@ERS, AP-074 (March 2017).

information, when disseminated, could have a potential impact of more than \$500 million in any one year, or is novel, controversial, or precedent-setting, or has significant interagency interest. This definition is also quoted in USDA's *Peer Review Implementation Guidelines*.<sup>57</sup> As noted previously, the Congressional Budget Office estimates the revised TFP, combined with increased inflation, will add an average of \$25 to \$30 billion per year to the cost of SNAP between 2022 and 2031.<sup>58</sup> In cases where information is considered highly influential, agencies have less discretion over how to carry out peer review (i.e., there are additional requirements), according to OMB guidelines. The OMB Bulletin's requirements include that employees of the sponsoring agency are generally not permitted to serve as reviewers. It is not clear if FNS has evaluated whether "highly influential" might be a more appropriate designation for the TFP. When we asked FNS officials if they considered the TFP to be a highly influential scientific assessment, they did not provide a direct response and instead referred us to a prior response indicating that they consider the TFP to be influential information. In addition, FNS's external peer review website states that the agency does not have any highly influential scientific assessments planned at this time.

Because FNS's peer review approach did not include a comprehensive, external review, the TFP report was completed without an opportunity for an independent peer reviewer to assess degrees of transparency, clarity, interpretation of the results, and to ensure that uncertainties and limitations were clearly identified and characterized in the final report. Further, without such a review, the 2021 TFP reevaluation process lacked an important quality assurance component and missed an opportunity to ensure the credibility of the results of the reevaluation.

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<sup>57</sup>USDA *Peer Review Implementation Guidelines*, 3.

<sup>58</sup>Congressional Budget Office, *The Cost of Eight Executive Actions Taken by the Biden Administration* (Washington, D.C.: June 22, 2022; updated June 23, 2022). Available at <https://www.cbo.gov/publication/58231>.

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## USDA Did Not Transparently Document or Analyze All Methodological Decisions and Measures for Success

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### Conflicting Constraints Led to Multiple Adjustments to Achieve the Final Market Basket

The process for calculating the TFP is complex and many of the constraints the model seeks to meet conflict with each other. The constraints are to ensure the Market Basket meets three fundamental goals outlined in the TFP report: (1) follow dietary guidelines in order to provide the recommended amounts of essential nutrients; (2) be reflective of current consumption patterns so individuals can more easily follow the diet; and (3) be low cost.<sup>59</sup> However, these goals and the constraints used to meet them are, at times, mutually exclusive. For example, a diet cannot both meet dietary guidelines and reflect current consumption patterns. As the 2021 TFP report notes, even healthier eaters in the U.S. still eat a diet far different than that outlined in the dietary guidelines.<sup>60</sup> In fact, no TFP Market Basket to date has provided 100 percent of the recommended amount of all nutrients used as constraints by the reevaluation team, or fully reflected the average consumption patterns of Americans.<sup>61</sup>

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<sup>59</sup>These various constraints are represented by over 100 mathematical equations that govern the contents of the final Market Basket. This model is used to develop Market Baskets for 15 groups that vary by age and sex (e.g., males age 20 to 50). The cost of the foods in the Market Baskets are used to calculate the cost of the TFP for a reference family of four: a man age 20 to 50, a woman age 20 to 50, one child age 9 to 11, and another child age 6 to 8.

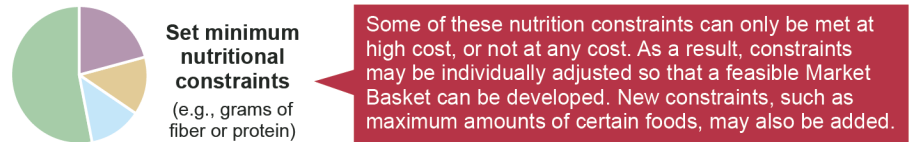
<sup>60</sup>In the 2021 TFP reevaluation, current consumption patterns were calculated using only individuals with Healthy Eating Index-2015 scores above the median for their age/sex group. The index measures how well a set of foods aligns with the *Dietary Guidelines for Americans 2020-2025*. This sample of individuals had average index scores between 54 and 62 out of 100 as opposed to the average of 45 to 53 when all individuals are included.

<sup>61</sup>According to the 2021 TFP report, the recommended level of the 19 micronutrients and 6 macronutrients used as constraints in the TFP are those set by the National Academies of Sciences, Engineering, and Medicine. This organization has established recommendations for a total of 29 micronutrients and 6 macronutrients, as well as water intake.



The TFP reevaluation team made adjustments to the constraints and to the data inputs so that they could resolve these conflicts and create a feasible Market Basket. For example, the 2021 TFP report states that early iterations of the Market Basket using the computer program generated a basket with eggs as the sole source of protein from the “meat, poultry, and eggs” subgroup, among other baskets with similarly impractical food group combinations. As a result, the reevaluation team created additional constraints limiting the amount of certain foods, such as eggs, allowed in the Market Basket. According to FNS officials, these types of adjustments are made at the discretion of the reevaluation team and have been made during all prior TFP reevaluations (see fig. 6).

**Figure 6: Example of Manual Adjustments to Thrifty Food Plan Constraints**



Source: GAO analysis of information from U.S. Department of Agriculture (USDA) documents. | GAO-23-105450

**Accessible Data for Figure 6: Example of Manual Adjustments to Thrifty Food Plan Constraints**

Set minimum nutritional constraints (e.g., grams of fiber or protein)

Some of these nutrition constraints can only be met at high cost, or not at any cost. As a result, constraints may be individually adjusted so that a feasible Market Basket can be developed. New constraints, such as maximum amounts of certain foods, may also be added.

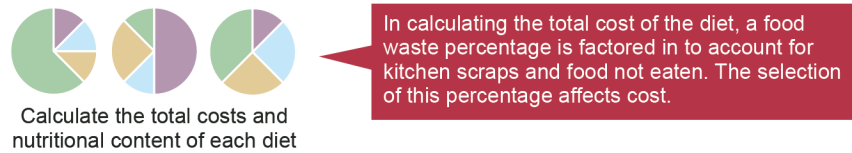
Source: GAO analysis of information from U.S. Department of Agriculture (USDA) documents. | GAO-23-105450

Note: This figure represents a step taken in the overall TFP modeling process. While the process is presented linearly, according to the Thrifty Food Plan 2021 report, the approach to creating the Thrifty Food Plan Market Baskets was more iterative. After completing initial phases of analysis, initial modeling results led to updates to the model's inputs and constraints.

USDA officials made other policy decisions throughout the reevaluation process in order to apply the Market Basket constraints, as they had in past reevaluations. For example, in order to apply the dietary constraints, the TFP reevaluation team needed to determine the specific calorie needs for 15 different age/sex groups, which required making assumptions about the average height, weight, and level of physical activity of the members in that group. USDA senior leaders weighed in on the decision regarding the activity levels and associated calorie constraints because, among other things, it affected SNAP benefit levels. In addition, FNS also needed to determine whether and how to adjust for

other issues related to the Market Basket, such as the amount of food that is wasted (e.g., kitchen scraps or spoiled food) or the time that individuals spend preparing meals at home (see fig. 7).

**Figure 7: How the Thrifty Food Plan Calculation Process Considers Food Waste**



Source: GAO analysis of information from U.S. Department of Agriculture (USDA) documents. | GAO-23-105450

**Accessible Data for Figure 7: How the Thrifty Food Plan Calculation Process Considers Food Waste**

Calculate the total costs and nutritional content of each diet

In calculating the total cost of the diet, a food waste percentage is factored in to account for kitchen scraps and food not eaten. The selection of this percentage affects cost.

Source: GAO analysis of information from U.S. Department of Agriculture (USDA) documents. | GAO-23-105450

## Key Reevaluation Decisions Did Not Fully Meet Standards for Economic Analysis

We identified and evaluated 11 key decisions made during the 2021 reevaluation process based on GAO standards for economic analysis, and found that no decision fully met these standards (see table 1).<sup>62</sup> We focused on decisions most relevant to each step in the process, such as selecting data sources and setting Market Basket constraints, and those regarding potential changes to the reevaluation process. Every decision we evaluated affected both the cost and the contents of the Market Basket to varying degrees.

As previously discussed, FNS did not have a documented quality management plan with specific steps to ensure the quality of the TFP reevaluation process and resulting Market Baskets. In addition, officials did not provide documentation of how they applied USDA’s Scientific

<sup>62</sup>GAO identified these elements as the key methodological elements of an economic analysis that is intended to inform decision-makers and stakeholders. See GAO, *Assessment Methodology for Economic Analysis*, [GAO-18-151SP](#) (Washington, D.C.: Apr. 10, 2018).

Integrity Policy Handbook to the TFP reevaluation. In the absence of applied standards, we evaluated decisions against standards in GAO’s *Assessment Methodology for Economic Analysis*, which generally apply to processes that generate economic information intended to inform public policy. These standards include: decision rationale, alternatives considered, analysis of effects, sensitivity analysis, and documentation. For example, an economic analysis should, among other things, have a scope designed to address its stated objectives, should justify all analytical choices, and should consider all relevant alternatives, including that of no action. See appendix I for a more detailed description of our analysis.

**Table 1: GAO Assessment of Economic Analysis in the Thrifty Food Plan (TFP) Reevaluation**

Component	Decision/Update	Met standards?	Example(s) of standards met or unmet
Data inputs	Used the same consumption and food composition (e.g., nutrients contained in foods) data sources as in 2006; food price data source updated	Approaching fully met	Sensitivity Analysis: The food price data was the only data source that changed from the previous reevaluation. This data source was produced by a third-party company and extensively analyzed by the Economic Research Service. However, there was insufficient documentation specific to its application to the TFP.
Optimization model	Changed underlying equation for calculating the TFP	Nearly not met	Alternatives, Analysis of Effects: No analysis of alternatives. No analysis of economic effect.
Food waste adjustment	Maintained 5% food waste adjustment factor	Nearly not met	Rationale, Documentation: Rationale in report does not include all of the factors considered in internal documentation. No documented analysis of alternatives or economic effects. No documentation of quality standards applied.
Optimal consumption measure	Updated to only include consumption patterns of “healthier” eaters	Not met	Alternatives, Analysis of Effects: No analysis of alternatives. No analysis of economic effect.
Dietary constraints	Updated to reflect current <i>Dietary Guidelines for Americans 2020-2025</i>	Not met	Rationale, Analysis of Effects: There is no clear justification for why the dietary constraints remained after they failed to provide adequate levels of nutrients, specifically once the nutrient constraints were added to meet this objective. There was no documented analysis of economic effects.
Calorie constraints	Updated activity levels used to calculate calorie needs for children	Nearly not met	Alternatives, Documentation: While documentation suggests the reevaluation team considered alternatives, such as increasing activity levels used to calculate calorie needs for all age groups, there is no documented analysis of these alternatives. No documentation of quality standards applied.
Cost constraints	Removed USDA policy that Market Basket must cost at or below inflation-adjusted cost of 1975 TFP Market Basket	Nearly not met	Analysis of Effects, Documentation: There was no documented analysis of economic effects. No documentation of quality standards applied.

Letter

Component	Decision/Update	Met standards?	Example(s) of standards met or unmet
Nutrient constraints	Updated to reflect current guidelines; certain nutrients adjusted at discretion of reevaluation team	Nearly not met	Rationale, Documentation: No documented rationale for which nutrients to include as constraints. No cited evidence in report to support rationale for adjustments to key nutrients. No documentation of quality standards applied.
Practicality constraints	Constraints added to prevent Market Basket from excluding certain foods or including other foods at an amount considered impractical	Not met	Analysis of Effects, Alternatives: No documented analysis of alternatives or economic effects.
Price groupings	“Low-cost” food definition updated to include foods up to the 35th percentile of prices	Nearly not met	Rationale, Alternatives: Insufficient documented support for rationale. Report does not discuss all considered alternatives.
Nutrient groupings	Grouped foods into high and low “nutrient density” using six nutrients	Nearly not met	Rationale, Alternatives: Resulting groups did not contain statistically significant different average amounts of any nutrient except for total sugar and added sugar. No documented analysis of alternatives.

Source: GAO analysis of U.S. Department of Agriculture (USDA) documents. | GAO-23-105450

While decisions around data inputs approached fully meeting standards, none of the key decisions we analyzed fully met standards. The report states, and FNS officials confirmed, one of the most impactful decisions in terms of cost was the decision to change the source of food price data. Prior reevaluations used data from varying sources.<sup>63</sup> During the 2021 TFP reevaluation, FNS decided to use food price data collected from retail store scanners during the checkout process. This data source was well researched and well documented by ERS and, according to FNS officials, is part of a larger trend within USDA toward the use of this data source as it better reflects prices paid by U.S. households, including SNAP recipients.<sup>64</sup> However, no decision fully met GAO standards for economic analysis, such as those related to documentation, rationale, and analysis of effect.

<sup>63</sup>The 1983 reevaluation used the Survey of Food Consumption in Low-Income Households data. The 1999 reevaluation used a dataset called Nielsen ScanTrack, in addition to other datasets. In 2006, the reevaluation used a dataset called Nielson HomeScan.

<sup>64</sup>See Mary K. Muth, Megan Sweitzer, Derick Brown, Kristen Capogrossi, Shawn Karns, David Levin, Abigail Okrent, Peter Siegel, and Chen Zhen. *Understanding IRI Household-Based and Store-Based Scanner Data*, TB-1942, U.S. Department of Agriculture, Economic Research Service, (April 2016); and Andrea C. Carlson, Carina E. Tornow, Elina T. Page, Amber Brown McFadden, and Thea Palmer Zimmerman. *Development of the Purchase to Plate Crosswalk and Price Tool: Estimating Prices for the National Health and Nutrition Examination Survey (NHANES) Foods and Measuring the Healthfulness of Retail Food Purchases*, Journal of Food Composition and Analysis, 106:104344, (December 2021).

**Documentation.** Several decision points during the 2021 TFP reevaluation lacked documentation on multiple fronts. For example, FNS provided a series of decision memos that listed options and recommendations for various decisions. However, only four of the 11 key decisions had a corresponding decision memo and all memos lacked information such as an author, analysis of the options, or the resulting decision. Additionally, the adjustments made to the Market Basket for purposes of practicality were generally not well documented. As noted previously, the reevaluation team made adjustments to the Market Basket constraints based on practical considerations, such as preventing the Market Basket from containing amounts of one specific food, such as eggs, far in excess of current consumption. The TFP report discusses practicality adjustments, but does not provide a detailed list of which specific adjustments were made for the purposes of making the Market Basket more practical.

**Rationale.** Another common theme was the lack of disclosure of the rationale for various decisions in the TFP report. For example, in the 2021 TFP reevaluation, FNS officials chose not to increase the adjustment for food waste. As discussed previously, the cost of the TFP Market Basket has always included a 5 percent increase to account for food waste, such as spoiled food. Experts participating in the roundtable as well as colleagues in ERS advised the reevaluation team to update the food waste adjustment to reflect a review of recent literature. According to ERS officials' comments on the draft 2021 TFP report, neither the evidence cited in the report nor in prior TFP reports supported the 5 percent adjustment. They pointed to studies showing a range of food waste estimates, including one recent study that estimated overall household food waste at 32 percent. Officials also acknowledged the most efficient households in that study wasted about 9 percent of food—nearly double the current adjustment.<sup>65</sup> The 2021 TFP report acknowledges estimates of food waste at 20 percent or higher, but states that FNS lacked sufficient evidence to support an alternative adjustment amount. In the internal decision memo, FNS officials stated that evidence supported a food-waste adjustment higher than 5 percent and described a 10 percent food-waste adjustment as “conservative.” Further, they believed increasing this adjustment would run counter to USDA’s goals to reduce food waste and maintaining the adjustment level at 5 percent would minimize the overall cost of the TFP. As a result of this lack of clear and accurate reporting of the factors involved in the decision, members of the public

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<sup>65</sup>Yang Yu and Edward C. Jaenicke. "Estimating food waste as household production inefficiency." *American Journal of Agricultural Economics* 102, no. 2 (2020): 525-547.

and policymakers reading the TFP report may not understand the rationale for decisions made by FNS officials in generating the final Market Basket.

**Analysis of effects.** Another common issue was the lack of sufficient analysis of the effects of decisions and comparison of alternatives. For example, the TFP reevaluation team decided to consider foods at or below the 35th percentile of prices within their category as “low cost,” compared to the 33rd percentile in the prior reevaluation. However, FNS did not provide documentation of how they analyzed alternative thresholds for “low cost” foods, or their impact on the contents of the final Market Basket. FNS provided a series of tables showing the overall cost of the TFP Market Basket without price groups and with price groups at different cut points.<sup>66</sup> The tables demonstrated that price grouping at the 35th percentile reduced the overall cost of the TFP from a roughly 50-percent increase without the price groups to the final 21-percent increase. The TFP report states that FNS considered multiple options for creating high- and low-cost categories, but does not mention the specific cut points considered. In addition, officials did not provide an accompanying analysis of the scientific or economic rationale for these cut points, of their effect on the Market Basket content, or of how the effects were considered in the decision-making process. The TFP report does not provide analysis justifying the 35th percentile cut point, beyond noting that a more restrictive cut point would have put canned tuna and other common foods in the high-cost groups.

Finally, many decisions did not meet GAO standards for economic analysis due to a lack of documented quality standards. As previously discussed, while FNS officials said that they used USDA’s Scientific Integrity Policy Handbook to ensure quality, they did not provide documentation of how these standards were implemented during the reevaluation process (e.g., through a checklist or templates). In addition, while USDA publishes general information quality guidelines that apply to all types of information disseminated by USDA agencies and offices to implement relevant OMB guidelines, FNS’s own guidelines are limited to providing instructions for individuals seeking to request a correction of information the agency has disseminated.<sup>67</sup> By comparison, ERS—designated a principal statistical agency within the federal government—

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<sup>66</sup>FNS estimated the cost of a Market Basket without cost groups and then using the 25<sup>th</sup>, 35<sup>th</sup>, 50<sup>th</sup>, 65<sup>th</sup>, and 75<sup>th</sup> percentiles as the low-cost levels.

<sup>67</sup>*Information Quality*, accessed September 8, 2022, <https://www.fns.usda.gov/information-quality>

has published its own data product quality guidelines. For example, these standards state that all products are thoroughly reviewed by knowledgeable staff prior to dissemination to verify the accuracy and validity of the data, and that the procedures used to conduct this review must be documented and available upon request. Creating the Market Basket to set the maximum SNAP benefit is a complex process that requires the reevaluation team to make a series of decisions. Without documentation of the specific quality standards that apply to the TFP and instructions on how to operationalize them, FNS may have difficulty ensuring the rigor of the process and the reliability of results for future reevaluations.

In addition to not meeting GAO economic analysis standards, FNS did not design, fully implement, or document key internal controls related to computer data processing. Specifically, they did not conduct or document an independent review of the computer program used to create the Market Basket. Computer programs such as these are susceptible to typos and other errors, and small variations in programs can result in dramatic differences in outcomes. FNS officials stated that team members responsible for creating the computer program reviewed each other's work, but this review was undocumented. Officials also stated that the computer programs used in the 2021 TFP reevaluation were based on programs created for prior reevaluations. Although the computer program may be similar to the programs used for prior reevaluations, without a documented code review, FNS lacks reasonable assurance that the computer program is free of error. Federal standards for internal control stress the importance of segregating key duties among different people to reduce the risk of error.<sup>68</sup>

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## FNS Did Not Sufficiently Define Market Basket Goals or Measures of Success

The 2021 TFP report lays out multiple overarching objectives for the Market Basket, though FNS identified few specific, well-defined metrics and did not conduct a comprehensive analysis of the Market Basket to

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<sup>68</sup>Specifically, principle 10 in *Standards for Internal Control in the Federal Government* states that management should design control activities to achieve objectives and respond to risk. A common example of a control activity includes dividing or segregating key duties and responsibilities among different people to reduce the risk of error, misuse, or fraud. This includes separating the responsibilities for authorizing transactions, processing and recording them, reviewing the transactions, and handling any related assets so that no one individual controls all key aspects of a transaction or event.

assess whether these objectives were met. As previously mentioned, FNS did not develop a charter for the TFP, which would involve setting measurable objectives and ensure a common understanding of what success looks like for the project. In addition to the three fundamental Market Basket goals—that it meet constraints related to dietary guidelines, average consumption patterns, and cost—the 2021 TFP report states that key objectives also included providing convenience foods as well as reflecting the cultural diversity of individuals and families served by SNAP (i.e., variety). However, FNS did not analyze whether the reevaluation met each stated objective. Specifically:

**Dietary guidelines.** The 2021 TFP reevaluation used a scoring system called the Healthy Eating Index to evaluate whether the Market Baskets

achieved the goal of meeting *Dietary Guidelines for Americans 2020-2025*.<sup>69</sup> The report states that the purpose of following the dietary guidelines is to ensure the Market Basket provides adequate amounts of essential nutrients. The report does not include a table of the nutrients provided in the Market Basket, but states generally that all nutrients fall within their recommended ranges, except for sodium and vitamins E and D.

**Convenience.** The report does not provide an explicit definition of convenience foods, nor does it include any analyses to determine whether the Market Basket met the objective of providing access to convenient food. The report does, however, provide several examples of foods FNS considered convenient, including frozen foods; precut vegetables; ready-to-eat breakfast cereal; canned, precooked beans; jarred pasta sauce; and bread. Although FNS considered these to be convenience foods for the TFP, some of these foods, such as canned beans, have instead been characterized as “complex ingredients” in other USDA work—meaning they are components of meals or snacks, require culinary skill or effort prior to consuming, and are rarely



**Project Goals and Project Charters**

One of the most common challenges in project management is determining whether or not a project is successful.

It is critical to clearly document the project objectives and to select objectives that are measurable. Three questions that the key stakeholders and the project manager should answer are:

- What does success look like for this project?
- How will success be measured?
- What factors may impact success?

The answer to these questions should be documented and agreed upon by the key stakeholders and the project manager.

Source: GAO analysis of *A Guide to the Project Management Body of Knowledge*. | GAO-23-105450

<sup>69</sup>This index consists of 13 components that correspond to the food groups and nutrients that make up the *Dietary Guidelines for Americans 2020-2025*, such as whole grains and sodium. A diet is assigned a score between 0 and 10 for each component based on how closely consumption of that component aligns with guidelines. These scores are then summed with a score of 100 representing a diet that perfectly adheres to the guidelines. The Market Baskets for the reference family members had Healthy Eating Index scores between 93 and 98.



consumed alone.<sup>70</sup> Given that FNS did not conduct an analysis of convenience, we used this example-based definition to analyze the individual foods that make up the Market Basket. We found that the Market Basket contains relatively few convenience foods as defined in the 2021 TFP report. Of all individual food items represented in the Market Basket, 22 percent are foods that met FNS's example-based definition of convenience (more than half of which are different brands or flavors of breakfast cereals).<sup>71</sup> See appendix I for a detailed description of this analysis.

**Variety.** The 2021 TFP report does not provide a metric against which to measure the objective of “variety,” nor did the report include an analysis of whether the Market Basket met the objective of providing foods to reflect cultural diversity. Given that, we analyzed the final Market Basket contents against the range of foods that could have been potentially included in the Market Basket. The Market Basket for the reference family includes 39 of the 95 food groups originally considered for inclusion in the Market Basket. These 39 food groups represent 1,038 unique foods, representing roughly 12 percent of the 8,951 individual foods reported in U.S. consumption data, calling into question the extent to which the Market Basket would meet the needs of a culturally diverse population.<sup>72</sup> Figure 8 outlines our analysis of the progressive reduction in the number of foods in the original dataset to those in the Market Basket.<sup>73</sup> Information on the number of

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<sup>70</sup>Examples of complex ingredients (as opposed to basic ingredients, such as rice) include pasta, sour cream, sauce, canned vegetables, and canned beans. On a continuum of foods from least to most convenient, basic and complex ingredients are the least convenient foods as they represent components of meals or snacks and are rarely eaten alone. Foods that are considered more convenient include ready-to-cook foods (e.g., require minimal preparation, such as heating or adding water) or ready-to-eat foods (e.g., are intended to be consumed as is). See Abigail M. Okrent and Aylin Kumcu, *U.S. Households' Demand for Convenience Foods*, ERR-211, U.S. Department of Agriculture, Economic Research Service (July 2016).

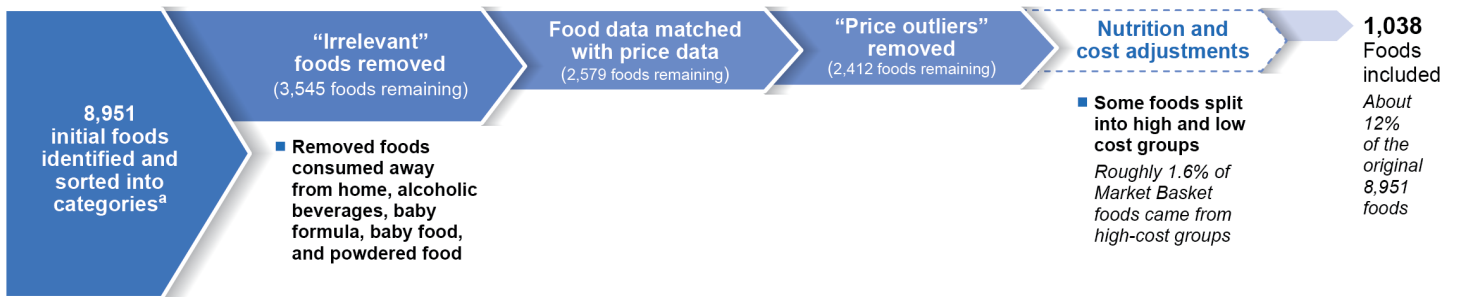
<sup>71</sup>Our analysis does not necessarily represent the best or only way to evaluate the convenience of the Market Basket, but rather represents one potential metric for evaluation.

<sup>72</sup>Our analysis does not necessarily represent the best or only way to evaluate the variety in the Market Basket, but rather represents one potential metric for evaluation. See appendix I for a detailed description of the analysis.

<sup>73</sup>The foods in the data and Market Basket vary in terms of flavor, packaging, or preparation. We removed these variations from individual food descriptions in the data and found that this reduced the number of unique foods represented in the Market Basket from 1,038 to 210.

foods removed during and remaining after each of these steps is not included in the 2021 TFP report.

**Figure 8: Selection of Foods from Food Database to Market Basket for the 2021 Thrifty Food Plan Reevaluation**



Source: GAO analysis of information from the U.S. Department of Agriculture (USDA) Thrifty Food Plan (TFP) Market Basket. | GAO-23-105450

**Accessible Data for Figure 8: Selection of Foods from Food Database to Market Basket for the 2021 Thrifty Food Plan Reevaluation**

Category	Foods remaining
8,951 initial foods identified and sorted into categories <sup>a</sup>	
"Irrelevant" foods removed Removed: Removed foods consumed away from home, alcoholic beverages, baby formula, baby food, and powdered food	3,545
Food data matched with price data	2,579
"Price outliers" removed	2,412
Nutrition and cost adjustments Some foods split into high and low cost groups	Roughly 1.6% of Market Basket foods came from high-cost groups
Foods included	1,038 (About 12% of the original 8,951 foods)

Source: GAO analysis of information from the U.S. Department of Agriculture (USDA) Thrifty Food Plan (TFP) Market Basket. | GAO-23-105450

<sup>a</sup>According to USDA officials, this number includes all unique foods reported in the 2013-2014 and 2015-2016 consumption data. Officials combined the two datasets to increase the number of observations used to calculate average consumption for foods reported in the 2015-2016 data. Any foods only reported in 2013-2014 data were eventually dropped. This process removed roughly 4,000 foods between this step and the next. We begin with the 8,951 count to better capture the potential variety in the larger food system. The absence of a food in the 2015-2016 consumption data does not mean it was not eaten or was not available for purchase.

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## Publicly Available Information Was Insufficient for External Researchers to Reproduce the TFP

FNS officials stated that USDA is committed to the transparency and reproducibility of their scientific analyses. USDA's Scientific Integrity Policy Handbook includes a reproducibility standard that states agencies must ensure sufficient transparency for analytic results, data, and methods that would enable an independent reanalysis. FNS officials stated that the TFP reevaluation met the reproducibility standard because FNS provided relevant data to researchers through its website and the 2021 report discloses the original data sources used to create the TFP. FNS officials said that this information would be sufficient for a properly trained researcher to reproduce the TFP. They added that they were aware of at least two academic researchers who had successfully reproduced the TFP.

### Reproducibility versus replicability:

To **reproduce** prior research work means to achieve consistent results using the same input data, computational steps, and methods of analysis.

To **replicate** prior research, on the other hand, is to confirm prior results using the same or similar methodology, but different data, to answer the same question. Although the research community has sometimes used the terms reproducibility and replicability interchangeably, the National Academies distinguishes the terms and illustrates the variety of ways that research is tested for reliability.

Source: GAO, *Research Reliability: Federal Actions Needed to Promote Stronger Research Practices*, [GAO-22-104411](#) (Washington, D.C.: July 28, 2022). | GAO-23-105450

However, we identified several issues that make it difficult for external parties to reproduce the TFP. To assess the reproducibility of the TFP, we reviewed the publicly available information provided by USDA and interviewed researchers working (or who have worked) to understand, reproduce, or replicate the TFP, including the two researchers who USDA said reproduced the TFP. First, the data FNS provides on its website (the 2021 TFP Online Supplement) lacks sufficient information, even when combined with other publicly available data, to accurately reproduce the 2021 TFP Market Basket. For example, the online supplement contains more foods than were used to estimate the TFP Market Basket. As a result, there is no way to determine which foods the reevaluation team removed to estimate the TFP without other non-publicly available information. Additionally, while the report cites the publicly available datasets used to create the TFP, it does not provide a complete accounting of the alterations made to these data sources before the TFP is calculated. For example, the Market Basket is estimated using food categories rather than individual foods, but the online supplement does not include the "high cost" and "low cost" food groups discussed previously. Therefore, it does not fully report what foods belong to what category, which is essential information for calculating average consumption, cost, and nutrients used to estimate the TFP. Further, FNS does not publish the computer program code the team used to calculate the TFP Market Basket, or a clear and concise list of all TFP constraints and their adjustments.

Researchers we spoke with agreed that the public documentation of the TFP process, including assumptions, adjustments, and decision rationale, lack clarity and completeness, making the process difficult to understand and reproduce. The researchers who were able to partially or totally reproduce the TFP did so by obtaining non-publicly available information directly from USDA.<sup>74</sup> They said that without direct access to the computer program code or direct communication with FNS officials, an independent researcher would have difficulty reconstructing the equations used to operationalize the constraints of the TFP, particularly those not explicitly described in the TFP report.<sup>75</sup>

Publishing a detailed, technical version of the process, including all of the final equations used to operationalize constraints, along with the computer code and raw data used to analyze it, would enhance the transparency and reproducibility of future TFP reevaluations and better meet USDA reproducibility standards. It could also open the process of calculating the TFP to greater public scrutiny and increase accountability.

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## Conclusions

USDA's decision in 2021 to allow the cost of the TFP to increase for the first time was a substantial and novel shift that raised the stakes for the reevaluation. Despite the greater importance of the 2021 TFP reevaluation, USDA did not take sufficient action to manage risk in planning and executing the reevaluation, particularly in light of accelerated timeframes. By foregoing key project planning steps, such as developing a project charter, USDA missed an opportunity to develop a common understanding among stakeholders of what success would look like for the reevaluation, or the specific quality standards the agency

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<sup>74</sup>One of the researchers submitted Freedom of Information Act requests for the 2006 and 2021 data. This researcher stated that they did not receive enough data to reproduce any part of the calculation done by USDA in 2021, but that they were able to partially reproduce the 2006 calculation. See Angela M. Babb, Daniel C. Knudsen, and Scott M. Robeson. "A critique of the objective function utilized in calculating the Thrifty Food Plan." PLoS ONE 14, no. 7 (2019): e0219895. See also Park E. Wilde and Joseph Llobrera. "Using the Thrifty Food Plan to Assess the Cost of a Nutritious Diet." The Journal of Consumer Affairs vol. 43, no. 2 (2009): 274-304.

<sup>75</sup>In commenting on a draft of our report, FNS noted that any independent researcher or team of researchers would need to possess significant expertise in the subject matter, optimization modeling, programming skills, and the data used. They also acknowledged that the two research teams who successfully reproduced the TFP analysis both interacted with USDA.

would employ—even under compressed timeframes—to ensure that threats to product quality were mitigated and project goals were met. Developing a comprehensive project management plan—one that includes a risk management plan, a quality management plan, a stakeholder engagement plan, and a requirements management plan—would further ensure that future reevaluations are executed in a manner consistent with key project management practices and that key quality assurance measures are not skipped. Additionally, the 2021 TFP reevaluation lacked a dedicated project manager to ensure that the project was on track to meet its goals, to weigh decisions against risks and opportunities, and to document project decisions. By investing in a dedicated project manager, USDA could buffer future TFP reevaluations against unanticipated events and safeguard the project’s success.

Further, failing to subject the 2021 TFP reevaluation to a comprehensive, external peer review—which is both a best practice and routine at FNS for studies with far less impact than the TFP—opened the reevaluation up to unnecessary risks to both the quality and the credibility of the results. Requiring FNS to subject future TFP reevaluations to formal, complete, and independent peer reviews prior to publication may help the agency to better manage such risks going forward. In addition, by not designating the TFP as a “highly influential scientific assessment,” USDA did not subject it to more stringent OMB guidance. Such a designation would ensure that future changes to the TFP are reviewed and validated by independent, external experts and increase the likelihood of robust, evidence-based results that could weather additional scrutiny.

In the absence of requirements to do so, the 2021 TFP reevaluation team generally did not follow standard practices for carrying out or documenting an economic analysis, such as performing and documenting underlying analyses to support key methodological decisions. The complexity of the TFP reevaluation and the significance of its results warrant quality assurance guidelines and controls embedded in the process, such as checklists to ensure the reevaluation team is aware of and held accountable for key quality assurance steps and applicable standards. Finally, by designing, documenting, and implementing key internal controls related to TFP’s data processing, in particular—including standards and procedures for review of computer code used to produce the Market Baskets—and by making the code, data, and equations available for independent reproduction and replication, USDA could ensure that future TFP reevaluations are more transparent.

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## Recommendations for Executive Action

We are making the following eight recommendations to the Secretary of Agriculture.

The Secretary of Agriculture should develop and document a process to ensure that TFP reevaluations follow the project management practice of establishing a key document at the start of a project, such as a project charter, that includes an overall assessment of risk and measurable objectives and metrics for success related to project requirements and other expectations for the project. (Recommendation 1)

The Secretary of Agriculture should develop and document a process to ensure that TFP reevaluations follow the project management practice of creating a comprehensive project management plan that describes how the project will be executed, monitored, controlled, and closed and, in addition to a project schedule, includes:

- a risk management plan that manages operational risk and applies controls to ensure the project meets its objectives.
- a quality management plan that describes how the project will be monitored and controlled based on applicable USDA and other federal quality standards.
- a stakeholder engagement plan outlining all of the relevant stakeholders that must be included in the reevaluation and their respective roles for achieving quality.
- a requirements management plan that establishes how the project requirements will be analyzed, documented, and managed.

(Recommendation 2)

The Secretary of Agriculture should develop and document a process to ensure that TFP reevaluations follow the project management practice of designating a project manager, or another member of the project team with project management expertise, to ensure that TFP reevaluations apply generally recognized project management practices, including creating key project documentation. (Recommendation 3)

The Secretary of Agriculture should develop and document a process to ensure that TFP reevaluations are subject to formal, comprehensive, and independent peer reviews before publication. (Recommendation 4)

The Secretary of Agriculture should consult with the Office of Information and Regulatory Affairs and designate the TFP as a “highly influential scientific assessment” subject to more stringent OMB guidance concerning peer review. (Recommendation 5)

The Secretary of Agriculture should establish specific quality assurance guidelines for TFP reevaluations that will ensure methodological decisions meet key quality standards for an analysis that will affect public policy and inform policy makers. These guidelines should summarize applicable USDA and other federal quality standards and should describe how such standards will be embedded in future TFPs. These guidelines should ensure that future TFP reports have:

- clear rationales linked to the objective and scope of the analysis;
- consideration of alternatives based in evidence, including important economic effects;
- underlying analysis of economic effects associated with decisions; where important economic effects cannot be quantified, the analysis explains how they affect the comparison of alternatives;
- transparent description of analytical choices, assumptions and data, including explanation of key limitations in the data and methods used; and
- adequate documentation included in the analysis; the analysis should document that it complies with a robust quality assurance process.

(Recommendation 6)

The Secretary of Agriculture should ensure that FNS designs, documents, and implements key internal controls related to data processing, including standards and procedures for review of the computer code used in generating the TFP Market Baskets. (Recommendation 7)

The Secretary of Agriculture should publish the computer code and raw data used to generate the TFP Market Baskets, to the extent allowable, along with all of the final equations used to create the model, in order to ensure qualified external parties can reproduce and replicate the TFP. (Recommendation 8)

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## Agency Comments and Our Evaluation

We provided a draft of this report to USDA and OMB for review and comment. OMB did not provide any comments. USDA's Food and Nutrition Service (FNS) provided technical comments, which we incorporated as appropriate. In its written comments, reproduced in appendix II, FNS did not explicitly agree or disagree with our recommendations. The agency stated that it concurred with select elements of our review and outlined steps planned or underway that align with the intent of some of our recommendations. For example, FNS committed to developing its own peer review guidance and agreed that publishing peer review plans for the TFP on the agency's website is a good practice. In addition, FNS said it plans to publish the computer code necessary to replicate the TFP and update its online supplement within 30 days to make the material more accessible to new users. However, FNS expressed significant concerns about some of our other findings and conclusions, as discussed in more detail below and in Appendix II.

In its letter, FNS disagreed with our selection and application of some evaluation criteria, specifically the project management and economic analysis standards we applied to the TFP reevaluation. As defined in *Government Auditing Standards*—which provide a foundation for government auditors to lead by example in the areas of independence, transparency, accountability, and quality—criteria identify the required or desired state or expectation with respect to the subject of the audit, or what “should” be.<sup>76</sup> Criteria help auditors to evaluate objectively and methodically the sufficiency and appropriateness of evidence against a known standard. Criteria provide a context for understanding the findings, conclusions, and recommendations in the report.

Whenever possible, we apply operational or program criteria that are directly relevant to the issue or program that is the subject of the audit, such as agency guidelines or regulations. However, as we note in the report, FNS did not identify any project management or quality assurance standards of its own that were applicable to the TFP reevaluation. As a result, we selected appropriate criteria from among our commonly used standards that represent generally accepted or leading practices. Importantly, we shared these criteria with FNS officials early on in our

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<sup>76</sup>GAO, *Government Auditing Standards: 2018 Revision Technical Update April 2021*. [GAO-21-368G](#). (Washington, D.C.: Apr. 14, 2021).



audit work, and they did not express any concerns about how the criteria applied to the TFP until their comments on our draft report.

FNS also stated in its comment letter that it disagreed with our finding that USDA began the TFP reevaluation without key project management elements in place. FNS stated that officials used sound project management principles during the TFP reevaluation, and that these principles aligned with the Project Management Institute's *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* principles, both the 6<sup>th</sup> edition we used in our review and the more recent 7<sup>th</sup> edition. However, as described in our report, FNS did not provide sufficient documentation that officials were following the project management practices outlined in the *PMBOK® Guide* edition that was current at the time of the reevaluation, or any other set of project management guidelines. Officials also did not provide any documentation that they have adapted their practices to follow the more recent version of the *PMBOK® Guide*, which was published in August 2021—the same month as the TFP report. Consequently, we maintain that our finding is accurate. In response to FNS's comments, we modified the language in our project management recommendations to allow FNS to adapt its approaches to the more recent version of the *PMBOK® Guide* moving forward. However, we stand by the recommendations that USDA should develop a foundational document, such as a charter, and more comprehensive project planning documents to guide future TFP reevaluations. Further, we continue to believe that USDA should designate staff to manage future TFP reevaluations to ensure adherence to project management leading practices, including more robust project documentation—even if USDA continues to take a team approach. Adopting these key elements would ensure more robust management of risks, quality, and stakeholder engagement, among other areas, and, ultimately, the success of future reevaluations.

In its comment letter, FNS took the position that the TFP reevaluation is not an economic analysis and, therefore, GAO's Assessment Methodology for Economic Analysis is an inappropriate standard to apply to the reevaluation. We stand by our decision to evaluate the TFP reevaluation as an economic analysis and, accordingly, did not make changes to our report, for the following reasons:

- FNS officials stated in an interview with us that they viewed the primary focus of the reevaluation to be assessing the cost of a healthy, basic diet. Moreover, officials told us that the key research objective for the 2021 TFP reevaluation is captured on page 8 of the

2021 TFP report: “USDA determined the lowest cost at which categories of foods and beverages that align with a healthy diet could be purchased with an assumption of ‘thrifty’ consumer choices.”

- GAO’s Assessment Methodology for Economic Analysis defines an economic analysis as any analysis that is intended to inform decision makers and stakeholders about the economic effects of an action. “Economic effects” include costs, benefits, and transfer payments, while “actions” include government rules, regulations, laws, projects, policies, and programs. As the 2021 TFP report notes, by law, the cost of the TFP is the basis for the maximum SNAP benefit allotments. The 2021 TFP reevaluation meets the GAO definition of an economic analysis as it is an analysis of costs intended to determine SNAP benefit levels.
- The economic effects of methodological decisions made in the reevaluation—in particular, how such decisions would affect the cost of the TFP and the allocation of goods in the Market Basket—were central to the TFP reevaluation.
- In economic terms, the TFP reevaluation is an empirical economic model aimed at modeling how a scarce resource (money) can be allocated to the purchase of goods (food) to satisfy optimal consumption goals (being as close as possible to current consumption patterns—what foods and beverages Americans reported consuming in a national survey) subject to certain conditions (meeting current dietary and nutrient guidelines).<sup>77</sup>

We continue to maintain that USDA should establish specific quality assurance guidelines for TFP reevaluations that will ensure methodological decisions meet key quality standards for an analysis that will affect public policy and inform policy makers. Doing so will better ensure the integrity and quality of future TFP reevaluations as well as allow such reevaluations to be assessed against USDA’s own quality guidelines.

In addition to disagreeing with the project management and economic analysis criteria we applied, FNS’s comment letter disputes other key findings and asserts that the TFP reevaluation process was evidence based, extensively documented, and transparent. However, during our audit, inadequate documentation made it difficult to independently

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<sup>77</sup>In more technical terms, the TFP reevaluation utilizes a constrained optimization model subject to a budget constraint using prices as inputs. This is a standard type of economic model.

evaluate the process, including verifying that it was evidence based. We address several of these issues below, and others in appendix II:

- FNS stated in its comments that the reevaluation team documented all decisions in decision memos that examined the scientific literature and potential alternatives with a recommendation based on the weight of the scientific evidence. However, the evidence we assessed does not support this statement. First, FNS did not provide decision memos for seven of the key methodological decisions, including, for example, the decision to adjust the cost constraint to allow the real costs of the TFP to increase beyond inflation. Second, four memos total and just one of the memos addressing a key decision cited any research and that memo did not include any bibliographic references that would allow a reader to identify the source. Third, no memo addressing a key decision referenced or linked to internal analysis conducted by FNS on the overall weight of the scientific evidence. Further, while all the memos list options and about half include recommendations from the reevaluation team, there is no record of the disposition of the final decision in the decision memos or of any stakeholder input on the content.
- Aside from select departmental policies and guidance, the TFP report itself, underlying data and code, and the decision memos discussed previously, FNS provided limited contemporaneous documentation of the reevaluation process. For example, in response to our request for project-related documents, FNS copied and pasted excerpts from emails, Microsoft Teams chats, and meeting agendas, into a single Word document. Because of the format, we were not able to verify when the documents were created or who created them. Nonetheless, we assessed this information for evidence of key project management elements. While these informal documents confirmed that the team met regularly and discussed timelines, they did not provide evidence that FNS had documented or employed the three key project management practices we identified.
- FNS took issue with our analysis and discussion of what constitutes a convenience food, stating that we misunderstood the data and model. The 2021 TFP report states that the Market Basket offers convenience, but FNS did not provide any analysis to support this statement in the TFP report nor did they provide documentation during the course of our review demonstrating that they conducted such an analysis. The purpose of our high-level analysis of convenience foods in the TFP Market Basket was to illustrate one type of analysis that FNS could have done to quantify the extent to which the final Market Basket met the goal of offering families access

to convenience foods. In response to FNS's comment, we clarified in our report that there may be other ways to measure convenience in the final Market Basket.

In summary, we evaluated the sufficiency and appropriateness of the evidence we were given by USDA, and we stand by our findings, conclusions, and recommendations based on that evidence.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Agriculture, the Director of the Office of Management and Budget, and other interested parties. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-7215 or [larink@gao.gov](mailto:larink@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix III.



Kathryn A. Larin,  
Director  
Education, Workforce, and Income Security Issues

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# Appendix I: Objectives, Scope, and Methodology

In this review of the U.S. Department of Agriculture's (USDA) 2021 reevaluation of the Thrifty Food Plan (TFP), we examine three key research objectives: (1) USDA's administrative process for reevaluating the TFP in 2021 and the extent to which the process employed leading project management practices in planning the reevaluation; (2) the extent to which USDA gathered and analyzed external input to inform the 2021 TFP reevaluation; and (3) how the methodology and results of the 2021 TFP reevaluation compare to methodological standards.

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## Administrative Processes and Leading Project Management Practices

The goal for this objective was to understand how USDA officials planned and managed the 2021 TFP reevaluation, and compare that to leading practices in project management. We requested and reviewed, if available, USDA documents related to project management plans and schedules, standards or guidance applicable to the TFP, internal and external stakeholder engagement, and risk assessment, among other things.

In addition, we interviewed officials from the Food and Nutrition Service (FNS), which is responsible for developing and updating the TFP. Within FNS, we interviewed officials from the Center for Nutrition Policy and Promotion (CNPP), including the Director of Nutrition Guidance and Analysis, and analysts from the Nutrition and Economic Analysis Team and the Nutrition Evidence Systematic Review Team.<sup>1</sup> We also interviewed an official from the Office of Policy Support (OPS) who played a role in helping manage and coordinate the TFP project. Additionally, we obtained written responses from USDA's Office of the General Counsel about their role as stakeholders in the TFP reevaluation. Lastly, we also interviewed officials from the USDA Office of Inspector General (OIG) and

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<sup>1</sup>A recent FNS reorganization has reclassified the Nutrition and Economic Analysis Team as a branch called the "Nutrition and Economic Analysis Branch."

obtained written responses from Office of Management and Budget (OMB) officials about any role they played in the reevaluation.

We compared the documents and testimonial information we collected to leading project planning practices in the Project Management Institute's *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*. The Project Management Institute is a not-for-profit association that, among other things, provides standards for managing various aspects of projects, programs, and portfolios. The *PMBOK® Guide* is different from a methodology, such as Agile, or a quality improvement tool, such as Six Sigma. According to the *PMBOK® Guide*, a methodology is a system of practices, techniques, procedures, and rules used by those who work in a discipline. *The PMBOK® Guide* states that it is a foundation upon which organizations can build methodologies, policies, procedures, rules, tools and techniques, and life cycle phases needed to practice project management. The *PMBOK® Guide* defines a project as a temporary endeavor undertaken to create a unique product, service, or result.

### Concepts and Principles in Project Management

The *PMBOK® Guide* identifies a subset of the project management body of knowledge that is generally recognized as good practice.<sup>2</sup> According to the *PMBOK® Guide*, "generally recognized" means that the knowledge and practices described are applicable to most projects most of the time, and there is consensus about their value and usefulness. "Good practice" means that there is general agreement that the application of the knowledge, skills, tools, and techniques to the project management processes can enhance the chance of success over many projects in delivering the expected business values and results. Such practices include:

- Development of a project charter, a document issued by the project initiator or sponsor that formally authorizes the existence of a project, and provides the project manager with the authority to apply organizational resources to project activities. It ensures common understanding among stakeholders regarding project deliverables.
- Development of a project management plan, i.e., defining, preparing, and coordinating all plan components and consolidating them into an integrated project management plan. The key benefit of this process

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<sup>2</sup>Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* Sixth Edition (2017).

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is the production of a comprehensive document that defines the basis of all project work and how the work will be performed.

- Assignment of a dedicated project manager who works with the project team and other stakeholders to determine and use the appropriate generally recognized good practices for each project. Project managers:
  - expect change and implement processes to keep change managed and controlled;
  - progressively elaborate high-level information into detailed plans throughout the project life cycle;
  - manage the project team to meet the project objectives;
  - monitor and control the work of producing the products, services, or results that the project was undertaken to produce.

We selected these three elements after consulting with an internal expert and identifying these practices as most foundational to quality control and project success.

We also determined that control activities related to the identification, analysis, and response to risk and to change were significant to this objective, along with the underlying principles that management should design control activities to achieve its objectives and respond to risks and implement control activities through policies.<sup>3</sup> Specifically, we assessed the extent to which USDA responded to the change in the policy context surrounding the TFP reevaluation, such as the provision in the 2018 Farm Bill related to regular reevaluations of the TFP and the subsequent decision by USDA to allow the real costs of the TFP to increase beyond adjustments for inflation. We also assessed how the agency identified and managed risk related to that change, as well as risk related to the acceleration in the project timeframes, in its reevaluation of the TFP.

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## Information Gathering and Peer Review

To address our second objective, we examined USDA documents, including literature reviews and academic articles, transcripts of stakeholder discussions, peer review comments, project planning documents, internal communication, and other documentation provided by USDA. We also interviewed FNS and Economic Research Service

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<sup>3</sup>GAO, *Standards for Internal Control in the Federal Government*. [GAO-14-704G](#) (Washington, D.C.: September 2014).

(ERS) officials. In particular, we interviewed ERS officials about their role in collaborating and advising on the project and in providing peer review. We examined the way USDA planned and used research to inform the reevaluation by reviewing how FNS used the content from the expert roundtables and stakeholder listening session transcripts and by comparing the rapid reviews and evidence scan to the standards for systematic review provided by FNS.

We compared the peer review activities FNS engaged in for the TFP to their typical peer review practices for influential information, as well as to USDA and OMB guidelines regarding peer reviews for influential information. We also reviewed the OMB guidelines related to highly influential scientific assessments.<sup>4</sup> OMB guidelines state that when used in the phrase “influential scientific, financial, or statistical information,” influential means that the agency can reasonably determine that dissemination of the information will have or does have a clear and substantial impact on important public policies or important private sector decisions.<sup>5</sup> A scientific assessment is considered “highly influential” if the agency or the Office of Information and Regulatory Affairs Administrator determines that the information, when disseminated, could have a potential impact of more than \$500 million in any one year and could be interpreted as precedent-setting or has significant interagency interest. To identify FNS’s typical peer review practices, we examined peer review plans for all four influential information studies FNS published in 2021.

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## Methodological Review

To address our third objective regarding the methodology of the reevaluation, we examined technical documentation provided by FNS, including data, internal memoranda, code, peer review comments, and underlying analysis, where available; and interviewed officials from FNS and ERS. We also interviewed outside researchers who have worked with

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<sup>4</sup>Relevant USDA guidance included USDA’s Scientific Integrity standards (U.S. Department of Agriculture, Office of the Chief Scientist. *Scientific Integrity*, Departmental Regulation DR 1074-001 (Nov. 18, 2016); and Scientific Integrity Policy Handbook (Guidance for Implementation of DR 1074-001). USDA’s guidelines refer to OMB guidelines concerning peer reviews, which we applied to our review of FNS’s peer review process for the TFP.

<sup>5</sup>*Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies*; Republication, 67 Fed. Reg. 8,452 (Feb. 22, 2002).



or conducted research relevant to the TFP and SNAP, as well as researchers who have worked to reproduce the TFP results. For the purpose of this report, we considered the reevaluation of the TFP an economic analysis.<sup>6</sup>

### Key Elements of Sound Economic Analysis

We compared the information we gathered about the TFP reevaluation to GAO's assessment methodology for economic analysis. In 2018, GAO identified five key methodological elements of an economic analysis. These key elements are:

1. Objective and scope (decision rationale): The economic analysis explains the action examined and includes a rationale and justification for the action.
2. Methodology (alternatives considered): The economic analysis examines the effects of the action by comparing alternatives, using one of them as the baseline. Unless otherwise justified, it considers alternatives that represent all relevant alternatives, including that of no action.
3. Analysis of effects: Where important economic effects cannot be quantified, the analysis explains how they affect the comparison of alternatives. Where the equity and distributional impacts are important, the full range of these impacts is separately detailed and quantified, where feasible.
4. Transparency (sensitivity analysis): The economic analysis describes and justifies the analytical choices, assumptions, and data used. The analysis assesses how plausible adjustments to each important analytical choice and assumption affect the estimates of the economic effects and the results of the comparison of alternatives.
5. Documentation: The economic analysis is clearly written, with a plain language summary, clearly labeled tables that describe the data used and results, and a conclusion that is consistent with these results. The analysis cites all sources used and documents that it is based on the best available economic information. The analysis documents that it complies with a robust quality assurance process.

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<sup>6</sup>GAO defines an economic analysis as an analysis that is intended to inform decision makers and stakeholders about the economic effects of an action. The TFP reevaluation is an example of one type of economic analysis: an analysis of the costs of a government program, project, or policy. GAO, *Assessment Methodology for Economic Analysis*, [GAO-18-151SP](#) (Washington, D.C.: Apr. 10, 2018).

Based on these five key elements, we developed rubrics to evaluate the key aspects of the TFP reevaluation methodology. Each rubric listed the five key evaluation elements, along with a list of relevant questions pertaining to the element. We completed the rubrics first based on information stated in the 2021 TFP report. If the information was not available in the 2021 TFP report, we reviewed internal documentation FNS provided. We gave a score (5-Fully met, 4-Aproaching fully met, 3-Partly met, 2-Nearly not met, 1-Not met) for each element. Based on the score for each of the five elements, an overall score was given. One economist completed the rubrics, and a methodologist or economist reviewed each rubric, including the narrative assessments and overall scores, for verification and concurrence. A final review was completed by another economist. We developed separate rubrics for the following aspects of the 2021 TFP reevaluation methodology:

- Data inputs
- Optimization model
- Measure of optimal consumption
- Food waste adjustment
- Cost constraint
- Nutrient constraints
- Dietary constraints
- Practicality constraints
- Nutrient groupings
- Price groupings

### Market Basket Analysis

We explored the contents of the 2021 TFP Market Basket to understand the variety and type of food represented. We compared the contents of the Market Basket for a reference family of four against the stated goals of the Market Basket as described in the TFP report.

We grouped the goal statements in the TFP report into categories. Below is a list of those categories, various statements from the TFP report that correspond to the categories, and the assessment we performed (see table 2).

**Table 2: GAO’s Method for Analysis of the 2021 Thrifty Food Plan Market Basket for a Reference Family of Four**

Goal category	Goal as defined in the TFP report	GAO assessment performed
Variety of foods	<ul style="list-style-type: none"> <li>“reflect the cultural food ways of the diverse individuals and families in the United States served by SNAP”</li> <li>“including convenience foods, in their nutrient-dense forms”</li> <li>“range of choices for a broad spectrum of individual circumstances”</li> </ul>	Counted the number of unique food types represented in the final Market Basket based on numeric food codes and food descriptions
Convenience	<ul style="list-style-type: none"> <li>“that are practical”</li> <li>“including convenience foods”</li> <li>“consider convenient forms”</li> </ul>	Performed a text analysis on the descriptions of the foods in the final Market Basket using example-based definitions of convenience provided in the TFP report—for instance, the report gave the examples of “pasta sauce in a jar, canned beans, and bread” as convenience and ready-to-eat foods. Accordingly, we identified and counted any food description that contained the following words or phrases: bread, canned, frozen, jarred, precut, ready-to-eat, or pasta sauce. To provide a more generous analysis of convenience foods, we expanded the definition of convenience to include additional key words: prepackaged, ready-to-drink, ready-to-heat, instant, quick, microwave, and ready-to-serve.

Source: GAO analysis of U.S. Department of Agriculture (USDA) data. | GAO-23-105450

We assessed the reliability of data we received from FNS by reviewing related documentation, conducting interviews with knowledgeable officials, and electronic data testing. We determined that these data were sufficiently reliable for the purposes of this engagement, specifically for the analysis of the contents of the Market Basket.

Assessing Reproducibility

We did not attempt to reproduce the TFP or the Market Basket. Instead, we interviewed USDA officials, researchers familiar with the TFP, and researchers who had worked to reproduce the TFP; we examined and assessed publicly available information against the computer code and other internal data and documentation provided by the agency. We compared this information to USDA’s publicly posted guidance on ensuring information quality, USDA’s Scientific Integrity Policy Handbook, and federal standards for internal control concerning information systems and computer data processing.<sup>7</sup>

<sup>7</sup>Federal law required OMB to establish guidelines that required each federal agency to establish guidelines to ensure the “objectivity, utility, and integrity of information [...] disseminated” by the agency. See 67 Fed. Reg. 8,452 (Feb. 22, 2002).

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## Appendix II: Comments from the U.S. Department of Agriculture

Note: GAO comments  
supplementing those in  
the report text appear at  
the end of this appendix.

Appendix II: Comments from the U.S.  
Department of Agriculture



United States Department of Agriculture

Food and  
Nutrition  
Service  
  
1320  
Braddock  
Place  
Alexandria  
, VA  
22314

Kathryn Larin  
Director – Education, Workforce, and Income Security  
United States Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

October 28, 2022

Dear Ms. Larin:

The United States Department of Agriculture (USDA) Food and Nutrition Service (FNS) appreciates the opportunity to respond to the Government Accountability Office (GAO) draft report titled, “*Thrifty Food Plan: Better Planning and Accountability Could Help Ensure Quality of Future Evaluations*” (GAO-23-105450).

FNS undertook a robust evidence-driven process to reevaluate the Thrifty Food Plan (TFP) per Congress’s 2018 Farm Bill<sup>1</sup> provision which specified four specific components for FNS to consider and directed USDA to re-evaluate the TFP no later than 2022 and then every five years thereafter. We believe there are several key features to the FNS reevaluation process worth noting.

- **FNS drew upon extensive technical expertise and experience** from the nutritionists and economists within its Center for Nutrition Policy and Promotion (CNPP). This team of experts has extensive experience with the TFP optimization model and the multiple underlying datasets. We also drew upon broader USDA expertise in key areas, including consultation with economists from the Economic Research Service on methods for calculating food prices, and nutrition scientists from the Agricultural Research Service on the food composition datasets used in the development of food categories used in the model.
- **FNS utilized the model used in all previous updates.** This existing model was the source for the TFP used throughout FY21. For the reevaluation, we assessed the model’s data sources and constraints and only made those updates which were supported by clear and convincing evidence. Where there was insufficient evidence to support changes to the existing assumptions, we kept the model as it was in the 2006 Thrifty Food Plan (when the plan was last reevaluated), and those assumptions were carried forward to this edition. The FNS TFP report also indicates where more research is needed to inform the next reevaluation. As GAO notes, there is a body of

<sup>1</sup> Section 4002 of the 2018 Farm Bill amended the definition of the TFP in section 3(u) of the Food and Nutrition Act of 2008 (7 U.S.C. 2012(u)) by adding the following: “By 2022 and at 5-year intervals thereafter, the Secretary shall re-evaluate and publish the market baskets of the thrifty food plan based on current food prices, food composition data, consumption patterns, and dietary guidance.” Section 4002 of the 2018 Farm Bill will be referred to as the “2018 Farm Bill” for simplicity.

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**Appendix II: Comments from the U.S.  
Department of Agriculture**

evidence which might suggest further changes (the vast majority of which points to the TFP being too low) than FNS adopted. However, the available evidence was insufficiently clear to support a change, and as a result, while FNS considered a wide range of evidence, we ultimately made few significant changes to the prior approach.

- **The TFP reevaluation is well documented and transparent.** The TFP, 2021 report provided more transparency regarding the analyses and considerations than any prior TFP update. FNS consulted with experts and incorporated feedback at multiple stages in the effort, including listening sessions with external stakeholders and reviews of the methodology by subject matter experts throughout the process. Finally, FNS has made data publicly available for analysts to reproduce the model via an online supplement to the report available on its website.
- **Sound management controls were in place to meet ambitious timelines.** FNS successfully completed the reevaluation of the TFP for the contiguous States, consistent with the President's direction to all Executive branch agencies to address the economic crisis associated with the pandemic and the 2018 Farm Bill mandate. FNS achieved this through several means, including splitting the original project plan into two phases which included deferring the reevaluation of the TFP for Alaska and Hawaii to a later date than originally planned. It also included increasing resources devoted to the project necessary to complete the core reevaluation on an expedited time frame.
- **FNS undertook the reevaluation at a time when millions of Americans were experiencing significant hardship.** As a result of the COVID-19 pandemic and related economic fallout, rates of food hardship were quite high. USDA sought to complete the core reevaluation work in an expedited manner without compromising our analytic standards.
- **The resulting increase in the TFP was meaningful but modest.** The TFP is the basis for Supplemental Nutrition Assistance Program (SNAP) benefits. The reevaluated TFP resulted in a 21 percent increase in maximum SNAP benefits which raised the average benefit by \$1.19 per person, per day in FY 2022.
- **FNS's ongoing and future TFP work reflects a commitment to continuous improvement.** FNS identified specific research needs to strengthen future TFP reevaluations and is developing a robust FY23 research plan to meet those commitments. For example, we believe it is worthwhile to reassess the TFP model and part of our plan would convene an expert panel to identify alternative approaches to estimate the TFP. FNS will also develop enhanced procedures for external researchers to review data and methods as part of the reevaluation process.

GAO's report outlines several concerns with FNS's reevaluation effort. Some of the feedback is quite helpful and we will incorporate it into our ongoing work related to future TFP reviews. However, we believe that many of GAO's concerns stem from a fundamental difference of perspective regarding what the 2018 Farm Bill reevaluation directed. Taken collectively, GAO's

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concerns appear to reflect a perspective that the reevaluation should have been approached as an opportunity to comprehensively reassess and possibly redesign the TFP methodology and inputs, according to a specific set of research standards identified by GAO and typically applied to comprehensive economic analyses. FNS does not share this view.

Based on Congress' directive, FNS considered the four specific elements outlined in the statute: current food prices, food composition data, consumption patterns, and dietary guidance. In conducting the reevaluation, FNS utilized the TFP model used in all previous updates and only made updates to the model's data sources and constraints consistent with the four specified criteria. We underscored that approach in our report. Moreover, as noted above, the agency only made those updates which were supported by clear and convincing existing evidence. As a result, we made very few significant changes. Given this fundamental difference in perspective, we believe that in key respects, GAO assessed our reevaluation against a standard we were not directed to undertake.

In summary, while we concur with select elements of GAO's review and will describe within this response actions already underway or planned by FNS to improve the next phase of our reevaluation effort, FNS has significant concerns with a number of GAO's conclusions. In addition, we believe that GAO's review has several serious computational errors related to their work with the model and its underlying data. These concerns are described below.

**1. Reevaluation Technical Approach:**

**The Thrifty Food Plan (TFP) is defined by law in the Food and Nutrition Act.**

At the direction of Congress and with the support of the President, FNS reevaluated the TFP to reflect the price of a practical, cost-effective, nutritious diet in today's current conditions. Specifically, the 2018 Farm Bill directed FNS to reevaluate the TFP based on four elements: current food prices, food composition data, consumption patterns, and dietary guidance. It also required that FNS complete its reevaluation by 2022 and directed FNS to conduct a new reevaluation every five years thereafter. Previously, the timing of any reexamination was decided at the Secretary of Agriculture's discretion.

FNS committed to a science-based reevaluation using the latest available data for all four elements and prioritized the completion of the review in line with direction from the President in his January 22 [Executive Order](#) as part of the commitment to "revising the Thrifty Food Plan to better reflect the modern cost of a healthy basic diet." Using an evidence-based process, FNS conducted the reevaluation of the TFP, which is the lowest cost of four USDA Food Plans. By law, the cost of the TFP serves as the basis for the maximum SNAP benefit allotments. The SNAP allotments are based on the TFP cost of the sum of the four "market baskets" for a reference family. The four market baskets are designed for a four-person reference family as defined by law: a male and a female aged 20-50 and two children, ages 6-8 and 9-11.

**FNS' TFP 2021 Reevaluation Aligned with Past Methods and Congressional Direction.**

Core to the TFP reevaluation is an optimization model that selects quantities of foods and beverages in Modeling Categories that, together, represent a nutritious diet, and are subject to a set of constraints. The reevaluation used the same optimization model utilized for all four of the

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**Appendix II: Comments from the U.S.  
Department of Agriculture**

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previous editions of the TFP, with updates to the model's data sources and constraints as described in detail in the [TFP, 2021 report](#).

In approaching the TFP reevaluation, FNS took as its mandate the statutory language in the 2018 Farm Bill directing FNS to consider: current food prices, food composition data, consumption patterns, and dietary guidance. FNS did not create a new model as a part of the reevaluation. Such an undertaking was not required to complete the Congressional directive. Moreover, we believed it was appropriate, particularly for this first update under the statutory mandate, to use the same optimization model as was used for all prior TFP updates.

FNS notes GAO utilized the GAO Assessment Methodology for Economic Analysis to assess the reevaluation. The TFP reevaluation contains aspects of GAO's definition of an "Economic Analysis," but FNS does not believe the standards as defined in this methodology are the appropriate framework for review. The TFP reevaluation is not an analysis of the economic effects of the TFP, but rather, it is a detailed description of the calculation of the diet required to feed a family of four persons. Components related to 'economic effects' are not referenced in the 2018 Farm Bill. As a result, FNS believes that the GAO's statements regarding the lack of analyses related to 'economic effects' are not appropriate criticisms of the FNS approach because of this misalignment.

**FNS Made Evidence-Based, Documented Decisions**

As shown in the extensive documentation provided to GAO, all decisions were documented using decision memos that examined the scientific literature and potential alternatives with a recommendation based on the weight of the scientific evidence. The TFP, 2021 report describes the rationale for each decision reached. Each decision memo included the following information:

1. *Issue/Purpose:* A brief summary of the decision needed as well as the significance.
2. *Background/Considerations:* A concise summary of the relevant data and peer-reviewed, scientific literature on the topic. It discusses whether there is a scientific consensus on the topic and, if not, what the differences might be or where findings may point to several options.
3. *Options:* A description of each of the options based on the data considerations summarized in the background/considerations section.
4. *Recommendation:* The recommendation and a brief rationale for the recommended option.

These decision memos, provided to GAO, included 14 decision points FNS had to make prior to conducting any analyses. The GAO report includes two examples which illustrate FNS' approach to evidence-based analysis.

**Updated Food Price Data**

The most significant change in the reevaluation was the food price data source. One of the core statutory mandates was to update our estimate of the TFP for current food prices. As described in the food price decision memo shared with GAO, FNS had two options to consider: follow prior practice and use "household-based scanner data" or update to "store-based scanner data." The decision memo provides a full analysis of the considerations, but two critical factors in the decision were that the household data underrepresents families with children and other large households, households headed by persons under age 35, and non-Hispanic Black and Hispanic

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households and contains missing data for certain items due to underreporting. The store-based data provides the strength of data collection through store scanners and better represents all households, including SNAP recipients. These factors contributed to the decision to use the store-based scanner data to meet the 2018 Farm Bill requirement to use “current food prices”. This decision contributed the highest proportion of the increase in the TFP cost. FNS is pleased that GAO agrees that “this data source itself was well-researched and well-documented,” and notes that it “is part of a larger trend within USDA toward the use of this data source as it better reflects prices paid by US households, including SNAP recipients.”

**Food Loss/Plate Waste Assumptions**

FNS’ decision on food loss is an example where evidence did not clearly support a specific change and FNS elected to take the careful and considered approach and maintained past practice. For example, as described in the TFP Report, prior TFP reevaluations included an assumption that five percent of a household’s food is lost due to plate waste or other loss such as spoilage. Some recent literature points to a significantly higher food loss/plate waste factor. Without a clear point estimate to use, FNS believed the prudent approach was to maintain the five percent factor in accordance with past practice, which recognizes that some level of food waste is inevitable without an assumption that a substantial proportion of the TFP cost is for purchasing food that will go uneaten. Had we used one of the higher consumer-level food waste factors suggested by this literature and cited in our report, the cost of the TFP would have increased by as much as an additional 27 percent. This decision was documented in our process and the final report.

Research on other key topics relevant to the TFP, such as time to purchase and prepare foods, also suggests that the Thrifty Food Plan is too low. However, FNS’s technical review concluded that evidence was insufficiently clear in support of a specific change or revision to model assumptions. As our TFP report indicated, we will continue to assess the evidence in these areas, as well as other topics relevant to the model prior to the next reevaluation. Our proposed FY23 research agenda will support such efforts.

**FNS Data Analyses are Technically Sound**

We are concerned that GAO’s audit report reflects misunderstanding of the TFP model and datasets which caused the team to draw incorrect conclusions. GAO’s report provides a number of critiques based on GAO’s own internal analyses. For example, the report states “[GAO] analyzed the individual foods that make up the food groups included in the Market Basket and found that the Market Basket contains relatively few convenience foods”, noting that the GAO analysis found only 22 percent of foods in this category. However, this statement reflects GAO’s choice to use a definition of convenience foods that we consider unreasonably limited, and not consistent with that used by FNS and clearly described in our TFP report. It also appears that GAO did not utilize the dataset provided by FNS correctly in this analysis. FNS’ analysis, shows that over 60 percent of the foods in the TFP Market Basket are in ready-to-serve purchasable forms, which require no additional preparation in order to consume, with an additional 6 percent in canned forms—all reflecting “convenience foods.” This conservative estimate doesn’t include fresh fruits and vegetables which are often eaten without any additional preparation - making some of them “convenience foods” as well. The FNS TFP project team spent significant time with the GAO team, and we continue to be available to work with GAO to ensure that their team can use the model and corresponding data sets appropriately.

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**Appendix II: Comments from the U.S.  
Department of Agriculture**

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In summary, FNS disagrees with GAO’s assessment that the reevaluation failed to disclose the rationale for decisions, provided insufficient analysis of the effects of decisions, and lacked documentation. As noted above, FNS conducted the analyses as directed by Congress in the 2018 Farm Bill and took a careful and considered approach—only making changes where there was updated data as well as clear and convincing evidence for a change. Regarding documentation and supporting analysis, as noted above, decision memos documented options with a summary of analyses and/or references to inform evidence-based decisions. The TFP, 2021 report<sup>2</sup> provided more transparency regarding the analyses and considerations than any prior TFP update, including providing additional technical details on the practicality constraints utilized, and more data in an online supplement. FNS is also committed to continuous quality advancements and is currently calculating the cost of the TFP in Alaska and Hawaii where we have already integrated more sensitivity analyses and additional documentation into our process.

**2. Project Management**

**FNS Utilized Sound Project Management Principles**

The GAO report utilizes a particular organization’s approach to project management. FNS agrees with GAO that the Project Management Institute (PMI) is a globally-recognized, non-profit organization that issues a well-respected *Project Management Book Of Knowledge (PMBOK) Guide* and also notes that it is only one of many different structures of project management that an organization may employ. While FNS acknowledges that we did not explicitly use the specific models against which GAO assessed FNS, we did in fact utilize project management principles fully consistent with PMI guidance. Throughout the reevaluation, FNS employed the use of project management principles, including formally designating a Project Liaison (“Project Manager”) and outlining timelines and project plans (“Project Plan”) – all guided by the 2018 Farm Bill<sup>3</sup> (“Charter”) specifically outlining our charge. These practices were consistent with those used in prior updates and in line with guidance from the Project Management Institute’s *Project Management Body of Knowledge (PMBOK) Guide*<sup>4</sup> – Sixth Edition.

It is worth noting that GAO assessed the TFP reevaluation against the Sixth Edition of the PMBOK Guide, which is no longer the most current version. The current Seventh Edition, which was released in August 2021, moves away from what PMI describes as “process-based standards” (*PMBOK® Guide 2021*, p.x) because “they are prescriptive by their very nature. With project management evolving more rapidly than ever before, the process-based orientation of the past editions cannot be maintained in the manner conducive to reflecting the full value delivery landscape. Therefore, this edition shifts to a principles-based standard to support effective project management and to focus more on intended outcomes rather than deliverables” (*PMBOK® Guide 2021*, p.x). FNS’ use of project management principles as part of the TFP reevaluation were aligned with the intent of both the current and previous editions of the PMBOK®.

**The Revised Definition of the TFP included in the 2018 Farm Bill was the FNS Charter**  
FNS shared with GAO during the fieldwork stage of this audit that we considered the revised

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<sup>2</sup> Link to report: [Thrifty Food Plan - 2021](#) (125 pages with four Appendices) and [Online Supplement](#)

<sup>3</sup> Section 3(u) of the FNA, as amended by the 2018 Farm Bill

<sup>4</sup> PMBOK® Guide, 6<sup>th</sup> Edition, 2017

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**Appendix II: Comments from the U.S.  
Department of Agriculture**

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definition of the TFP as our Charter, which the *PMBOK® Guide* defines as the “authority to apply organizational resources to project activities” (*PMBOK® Guide* 2017, p.34). It is key to note that the 2018 Farm Bill text provided not only the authority for this work, but also the parameters for the work, namely as to what the Secretary must consider in the TFP reevaluation.

**FNS Formally Identified a Project Manager**

GAO states that “FNS did not have a dedicated project manager to lead the 2021 TFP reevaluation.” As noted in documents provided to GAO and in interviews, a senior leader from the FNS Office of Policy Support (OPS) was the Project Liaison – only different in name to a Project Manager. The project manager as defined in the *PMBOK® Guide, Sixth Edition* (p.52) is responsible for leading “the team that is responsible for achieving the project objectives”. Additionally, a leader from the FNS Center for Nutrition Policy and Promotion (CNPP) was responsible for the technical aspects of the update. FNS notes that the OPS senior leader was assigned on special assignment to the TFP Reevaluation Team concurrent with the decision to expedite the reevaluation. This reflected FNS’ commitment to ensuring that the project had a designated leader to ensure that the objectives were met, and also served to add additional resources and expertise to the team.

**FNS Developed a Project Management Plan**

The GAO report states that “FNS Officials did not develop a comprehensive project management plan” and proceeds to name 10 subplans as “important project documents” that “were missing.” The original TFP project management plan was shared with GAO and included the scope, tasks, staff assigned, and resources needed along with identified threats to project success should those resources not become available. This plan did not identify the cost of the project because the TFP reevaluation is not funded as a separate budget line within FNS but is instead included in the overall CNPP budget for staff and administration.

In sum, FNS conducted the reevaluation of the TFP using key project management principles. FNS is committed to continuous improvement and will follow the PMI recommendations to continue to examine project management and planning processes and practices that meet the unique needs of each effort to reach the full value delivery landscape.

**3. Commitments for The Future**

As described above, FNS used a data-driven, scientific assessment to produce the TFP, which is an individual statistic that is applied to the October 1 maximum SNAP allotment annually. Importantly, while there were important changes in the 2021 TFP reevaluation, such as the store scanner data source previously mentioned, the underlying model for the reevaluation was based on the optimization model used in the past four TFP reevaluations. FNS is committed to a clear, transparent scientific process for this and all its work. USDA will respond to each of the GAO’s specific recommendations in detail as part of its Statement of Action, within 180 days of the formal release of the GAO report. In advance of that formal response, we make several key commitments for future TFP reevaluations that align with the intent of the recommendations from the GAO report. Some of these commitments can be implemented immediately and others represent a multiyear evaluation effort.

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**Appendix II: Comments from the U.S.  
Department of Agriculture**

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**FNS Will Incorporate More Peer Review**

USDA appreciates GAO's feedback and concurs that increased documentation of the Peer Review Plan for TFP and inclusion in the annual FNS Peer Review Plan on the FNS website is a good practice. While in the past FNS used the USDA Peer Review Guidance in its work, FNS will commit to developing a formal FNS Peer Review Guidance document, applying the USDA Guidance. In addition, FNS is committed to further clarifying the decision-making process for which scientific projects will be subject to Peer Review, how those decisions will be made, and the process for Peer Review. A future analysis of the cost of the TFP in Alaska and Hawaii will include external peer reviewers with demonstrated knowledge and expertise in price indexes, scanner data, food prices in Alaska and Hawaii, and the TFP.

**FNS Will Publish a Public Study Plan**

We are committing to developing a more detailed methodological statement prior to starting the next reevaluation that more clearly articulates the inputs, constraints, and dietary standards. USDA will create two versions – a technical document for analysts with the technical skills to understand and replicate the model, and a public-facing document using non-technical language so that policy and lay audiences without technical expertise can easily understand the decision points we used for the 2021 model which will form the basis for future reevaluations. Further, following OMB Guidance for Influential Statistics, as we did with the 2021 TFP Reevaluation, we will send the technical methodological paper for peer review to analysts with the knowledge and technical skills to peer review the methods prior to beginning the analysis and will make appropriate adjustments in response to the review.

**FNS Commits to Publishing data and code**

USDA appreciates and agrees with GAO's recommendation that USDA publish the computer code and data necessary to replicate the analyses. Just after publishing the TFP report, USDA posted an online supplement on its website with all data and information necessary for analysts to reproduce the model. USDA is committing to publishing the code and will also do so on future reevaluations. The code is currently available upon request. We are also preparing an updated online supplement to make it more accessible to new users and expect to publish it within the next 30 days. We will also include in the methodology section of future reports the quality assurance processes used, including review of computer code.

**FNS Will Conduct Ongoing TFP Research**

FNS is committing on its FY 2023 Research and Evaluation plan to conduct further TFP analysis, including case studies of how SNAP participants utilize their funds to purchase healthy diets. In addition, there were several topics for which there was insufficient evidence to warrant a change in methodology, as documented in the report. FNS will continue to monitor these topics through systematic reviews and analyses. Planned topics will likely include further examination/research into food loss/waste, food preparation time, accounting for online purchases in food prices and examining assumptions related to physical activity, body weight, dietary preferences, and mixed food dishes. In addition, while FNS utilized the previously existing optimization model for the 2021 update, we believe it is appropriate to thoroughly examine whether this longstanding model should be updated. To begin this process- which will likely require a multiyear effort- we will assemble a technical working group to examine alternatives to the current optimization model for USDA to consider.

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**Conclusion**

The 2018 Farm Bill directed FNS to reevaluate the TFP based on four elements: current food prices, food composition data, consumption patterns, and dietary guidance. FNS used a scientific, data-driven approach to reevaluate the TFP to reflect the price of a practical, cost-effective, nutritious diet in today's current conditions. FNS took a careful and considered approach, updating the data and the optimization model when aligned with the 2018 Farm Bill mandate and where the body of scientific evidence was clear and convincing in support a change. The result aligns with the authority and directive in the 2018 Farm Bill, enacted by Congress and fulfills the goals supported by the President to reflect a practical, cost-effective, diet based on consumer consumption and aligned with dietary guidance.

Thank you again for the opportunity to review and respond to the GAO draft report.

Sincerely,



Cynthia Long  
Administrator, FNS

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# Accessible Text for Appendix II: Comments from the U.S. Department of Agriculture

Kathryn Larin  
Director – Education, Workforce, and Income  
Security United States Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

October 28, 2022

Dear Ms. Larin:

The United States Department of Agriculture (USDA) Food and Nutrition Service (FNS) appreciates the opportunity to respond to the Government Accountability Office (GAO) draft report titled, “Thrifty Food Plan: Better Planning and Accountability Could Help Ensure Quality of Future Evaluations” (GAO-23-105450).

FNS undertook a robust evidence-driven process to reevaluate the Thrifty Food Plan (TFP) per Congress’s 2018 Farm Bill<sup>1</sup> provision which specified four specific components for FNS to consider and directed USDA to re-evaluate the TFP no later than 2022 and then every five years thereafter. We believe there are several key features to the FNS reevaluation process worth noting.

- FNS drew upon extensive technical expertise and experience from the nutritionists and economists within its Center for Nutrition Policy and Promotion (CNPP). This team of experts has extensive experience with the TFP optimization model and the multiple underlying datasets. We also drew upon broader USDA expertise in key areas, including consultation with economists from the Economic Research Service on methods for calculating food prices, and nutrition scientists from the Agricultural Research Service on

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<sup>1</sup> Section 4002 of the 2018 Farm Bill amended the definition of the TFP in section 3(u) of the Food and Nutrition Act of 2008 (7 U.S.C. 2012(u)) by adding the following: “By 2022 and at 5-year intervals thereafter, the Secretary shall re-evaluate and publish the market baskets of the thrifty food plan based on current food prices, food composition data, consumption patterns, and dietary guidance.” Section 4002 of the 2018 Farm Bill will be referred to as the “2018 Farm Bill” for simplicity.

the food composition datasets used in the development of food categories used in the model.

- FNS utilized the model used in all previous updates. This existing model was the source for the TFP used throughout FY21. For the reevaluation, we assessed the model's data sources and constraints and only made those updates which were supported by clear and convincing evidence. Where there was insufficient evidence to support changes to the existing assumptions, we kept the model as it was in the 2006 Thrifty Food Plan (when the plan was last reevaluated), and those assumptions were carried forward to this edition. The FNS TFP report also indicates where more research is needed to inform the next reevaluation. As GAO notes, there is a body of evidence which might suggest further changes (the vast majority of which points to the TFP being too low) than FNS adopted. However, the available evidence was insufficiently clear to support a change, and as a result, while FNS considered a wide range of evidence, we ultimately made few significant changes to the prior approach.
- The TFP reevaluation is well documented and transparent. The TFP, 2021 report provided more transparency regarding the analyses and considerations than any prior TFP update. FNS consulted with experts and incorporated feedback at multiple stages in the effort, including listening sessions with external stakeholders and reviews of the methodology by subject matter experts throughout the process. Finally, FNS has made data publicly available for analysts to reproduce the model via an online supplement to the report available on its website.
- Sound management controls were in place to meet ambitious timelines. FNS successfully completed the reevaluation of the TFP for the contiguous States, consistent with the President's direction to all Executive branch agencies to address the economic crisis associated with the pandemic and the 2018 Farm Bill mandate. FNS achieved this through several means, including splitting the original project plan into two phases which included deferring the reevaluation of the TFP for Alaska and Hawaii to a later date than originally planned. It also included increasing resources devoted to the project necessary to complete the core reevaluation on an expedited time frame.
- FNS undertook the reevaluation at a time when millions of Americans were experiencing significant hardship. As a result of the COVID-19 pandemic and related economic fallout, rates of food hardship were quite high. USDA sought to complete the core reevaluation work in an expedited manner without compromising our analytic standards.

- The resulting increase in the TFP was meaningful but modest. The TFP is the basis for Supplemental Nutrition Assistance Program (SNAP) benefits. The reevaluated TFP resulted in a 21 percent increase in maximum SNAP benefits which raised the average benefit by \$1.19 per person, per day in FY 2022.
- FNS's ongoing and future TFP work reflects a commitment to continuous improvement. FNS identified specific research needs to strengthen future TFP reevaluations and is developing a robust FY23 research plan to meet those commitments. For example, we believe it is worthwhile to reassess the TFP model and part of our plan would convene an expert panel to identify alternative approaches to estimate the TFP. FNS will also develop enhanced procedures for external researchers to review data and methods as part of the reevaluation process.

GAO's report outlines several concerns with FNS's reevaluation effort. Some of the feedback is quite helpful and we will incorporate it into our ongoing work related to future TFP reviews. However, we believe that many of GAO's concerns stem from a fundamental difference of perspective regarding what the 2018 Farm Bill reevaluation directed. Taken collectively, GAO's concerns appear to reflect a perspective that the reevaluation should have been approached as an opportunity to comprehensively reassess and possibly redesign the TFP methodology and inputs, according to a specific set of research standards identified by GAO and typically applied to comprehensive economic analyses. FNS does not share this view.

Based on Congress' directive, FNS considered the four specific elements outlined in the statute: current food prices, food composition data, consumption patterns, and dietary guidance. In conducting the reevaluation, FNS utilized the TFP model used in all previous updates and only made updates to the model's data sources and constraints consistent with the four specified criteria. We underscored that approach in our report. Moreover, as noted above, the agency only made those updates which were supported by clear and convincing existing evidence. As a result, we made very few significant changes. Given this fundamental difference in perspective, we believe that in key respects, GAO assessed our reevaluation against a standard we were not directed to undertake.

In summary, while we concur with select elements of GAO's review and will describe within this response actions already underway or planned by FNS to improve the next phase of our reevaluation effort, FNS has significant concerns with a number of GAO's conclusions. In addition, we believe that GAO's review has several serious computational errors related to their work with the model and its underlying data. These concerns are described below.



1. Reevaluation Technical Approach:

The Thrifty Food Plan (TFP) is defined by law in the Food and Nutrition Act. At the direction of Congress and with the support of the President, FNS reevaluated the TFP to reflect the price of a practical, cost-effective, nutritious diet in today's current conditions. Specifically, the 2018 Farm Bill directed FNS to reevaluate the TFP based on four elements: current food prices, food composition data, consumption patterns, and dietary guidance. It also required that FNS complete its reevaluation by 2022 and directed FNS to conduct a new reevaluation every five years thereafter. Previously, the timing of any reexamination was decided at the Secretary of Agriculture's discretion.

FNS committed to a science-based reevaluation using the latest available data for all four elements and prioritized the completion of the review in line with direction from the President in his January 22 Executive Order as part of the commitment to "revising the Thrifty Food Plan to better reflect the modern cost of a healthy basic diet." Using an evidence-based process, FNS conducted the reevaluation of the TFP, which is the lowest cost of four USDA Food Plans. By law, the cost of the TFP serves as the basis for the maximum SNAP benefit allotments. The SNAP allotments are based on the TFP cost of the sum of the four "market baskets" for a reference family. The four market baskets are designed for a four-person reference family as defined by law: a male and a female aged 20-50 and two children, ages 6-8 and 9-11.

FNS' TFP 2021 Reevaluation Aligned with Past Methods and Congressional Direction.

Core to the TFP reevaluation is an optimization model that selects quantities of foods and beverages in Modeling Categories that, together, represent a nutritious diet, and are subject to a set of constraints. The reevaluation used the same optimization model utilized for all four of the previous editions of the TFP, with updates to the model's data sources and constraints as described in detail in the TFP, 2021 report.

In approaching the TFP reevaluation, FNS took as its mandate the statutory language in the 2018 Farm Bill directing FNS to consider: current food prices, food composition data, consumption patterns, and dietary guidance. FNS did not create a new model as a part of the reevaluation. Such an undertaking was not required to complete the Congressional directive. Moreover, we believed it was appropriate, particularly for this first update under the statutory mandate, to use the same optimization model as was used for all prior TFP updates.

FNS notes GAO utilized the GAO Assessment Methodology for Economic Analysis to assess the reevaluation. The TFP reevaluation contains aspects of GAO's definition of an "Economic Analysis," but FNS does not believe the standards as

defined in this methodology are the appropriate framework for review. The TFP reevaluation is not an analysis of the economic effects of the TFP, but rather, it is a detailed description of the calculation of the diet required to feed a family of four persons. Components related to 'economic effects' are not referenced in the 2018 Farm Bill. As a result, FNS believes that the GAO's statements regarding the lack of analyses related to 'economic effects' are not appropriate criticisms of the FNS approach because of this misalignment.

#### FNS Made Evidence-Based, Documented Decisions

As shown in the extensive documentation provided to GAO, all decisions were documented using decision memos that examined the scientific literature and potential alternatives with a recommendation based on the weight of the scientific evidence. The TFP, 2021 report describes the rationale for each decision reached. Each decision memo included the following information:

1. Issue/Purpose: A brief summary of the decision needed as well as the significance.
2. Background/Considerations: A concise summary of the relevant data and peer-reviewed, scientific literature on the topic. It discusses whether there is a scientific consensus on the topic and, if not, what the differences might be or where findings may point to several options.
3. Options: A description of each of the options based on the data considerations summarized in the background/considerations section.
4. Recommendation: The recommendation and a brief rationale for the recommended option.

These decision memos, provided to GAO, included 14 decision points FNS had to make prior to conducting any analyses. The GAO report includes two examples which illustrate FNS' approach to evidence-based analysis.

#### Updated Food Price Data

The most significant change in the reevaluation was the food price data source. One of the core statutory mandates was to update our estimate of the TFP for current food prices. As described in the food price decision memo shared with GAO, FNS had two options to consider: follow prior practice and use "household-based scanner data" or update to "store-based scanner data." The decision memo provides a full analysis of the considerations, but two critical factors in the decision were that the household data underrepresents families with children and other large households, households headed by persons under age 35, and non-Hispanic Black and Hispanic households and contains missing data for certain items due to underreporting. The

store-based data provides the strength of data collection through store scanners and better represents all households, including SNAP recipients. These factors contributed to the decision to use the store-based scanner data to meet the 2018 Farm Bill requirement to use “current food prices”. This decision contributed the highest proportion of the increase in the TFP cost. FNS is pleased that GAO agrees that “this data source itself was well-researched and well-documented,” and notes that it “is part of a larger trend within USDA toward the use of this data source as it better reflects prices paid by US households, including SNAP recipients.”

#### Food Loss/Plate Waste Assumptions

FNS’ decision on food loss is an example where evidence did not clearly support a specific change and FNS elected to take the careful and considered approach and maintained past practice. For example, as described in the TFP Report, prior TFP reevaluations included an assumption that five percent of a household’s food is lost due to plate waste or other loss such as spoilage. Some recent literature points to a significantly higher food loss/plate waste factor. Without a clear point estimate to use, FNS believed the prudent approach was to maintain the five percent factor in accordance with past practice, which recognizes that some level of food waste is inevitable without an assumption that a substantial proportion of the TFP cost is for purchasing food that will go uneaten. Had we used one of the higher consumer-level food waste factors suggested by this literature and cited in our report, the cost of the TFP would have increased by as much as an additional 27 percent. This decision was documented in our process and the final report.

Research on other key topics relevant to the TFP, such as time to purchase and prepare foods, also suggests that the Thrifty Food Plan is too low. However, FNS’s technical review concluded that evidence was insufficiently clear in support of a specific change or revision to model assumptions. As our TFP report indicated, we will continue to assess the evidence in these areas, as well as other topics relevant to the model prior to the next reevaluation. Our proposed FY23 research agenda will support such efforts.

#### FNS Data Analyses are Technically Sound

We are concerned that GAO’s audit report reflects misunderstanding of the TFP model and datasets which caused the team to draw incorrect conclusions. GAO’s report provides a number of critiques based on GAO’s own internal analyses. For example, the report states “[GAO] analyzed the individual foods that make up the food groups included in the Market Basket and found that the Market Basket contains relatively few convenience foods”, noting that the GAO analysis found only 22 percent of foods in this category. However, this statement reflects GAO’s choice to use a definition of convenience foods that we consider unreasonably limited, and not consistent with that used by FNS and clearly described in our TFP report. It also appears that GAO did not utilize the dataset provided by FNS correctly in this

analysis. FNS' analysis, shows that over 60 percent of the foods in the TFP Market Basket are in ready-to-serve purchasable forms, which require no additional preparation in order to consume, with an additional 6 percent in canned forms—all reflecting “convenience foods.” This conservative estimate doesn't include fresh fruits and vegetables which are often eaten without any additional preparation - making some of them “convenience foods” as well. The FNS TFP project team spent significant time with the GAO team, and we continue to be available to work with GAO to ensure that their team can use the model and corresponding data sets appropriately.

In summary, FNS disagrees with GAO's assessment that the reevaluation failed to disclose the rationale for decisions, provided insufficient analysis of the effects of decisions, and lacked documentation. As noted above, FNS conducted the analyses as directed by Congress in the 2018 Farm Bill and took a careful and considered approach—only making changes where there was updated data as well as clear and convincing evidence for a change. Regarding documentation and supporting analysis, as noted above, decision memos documented options with a summary of analyses and/or references to inform evidence-based decisions. The TFP, 2021 report<sup>2</sup> provided more transparency regarding the analyses and considerations than any prior TFP update, including providing additional technical details on the practicality constraints utilized, and more data in an online supplement. FNS is also committed to continuous quality advancements and is currently calculating the cost of the TFP in Alaska and Hawaii where we have already integrated more sensitivity analyses and additional documentation into our process.

## 2. Project Management

### FNS Utilized Sound Project Management Principles

The GAO report utilizes a particular organization's approach to project management. FNS agrees with GAO that the Project Management Institute (PMI) is a globally-recognized, non-profit organization that issues a well-respected Project Management Book Of Knowledge (PMBOK) Guide and also notes that it is only one of many different structures of project management that an organization may employ. While FNS acknowledges that we did not explicitly use the specific models against which GAO assessed FNS, we did in fact utilize project management principles fully consistent with PMI guidance. Throughout the reevaluation, FNS employed the use of project management principles, including formally designating a Project Liaison (“Project Manager”) and outlining timelines and project plans (“Project Plan”) – all

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<sup>2</sup> Link to report: Thrifty Food Plan - 2021 (125 pages with four Appendices) and Online Supplement

guided by the 2018 Farm Bill<sup>3</sup> (“Charter”) specifically outlining our charge. These practices were consistent with those used in prior updates and in line with guidance from the Project Management Institute’s Project Management Body of Knowledge (PMBOK) Guide<sup>4</sup>-- Sixth Edition.

It is worth noting that GAO assessed the TFP reevaluation against the Sixth Edition of the PMBOK Guide, which is no longer the most current version. The current Seventh Edition, which was released in August 2021, moves away from what PMI describes as “process-based standards” (PMBOK® Guide 2021, p.x) because “they are prescriptive by their very nature. With project management evolving more rapidly than ever before, the process-based orientation of the past editions cannot be maintained in the manner conducive to reflecting the full value delivery landscape. Therefore, this edition shifts to a principles-based standard to support effective project management and to focus more on intended outcomes rather than deliverables” (PMBOK® Guide 2021, p.x). FNS’ use of project management principles as part of the TFP reevaluation were aligned with the intent of both the current and previous editions of the PMBOK®.

The Revised Definition of the TFP included in the 2018 Farm Bill was the FNS Charter

FNS shared with GAO during the fieldwork stage of this audit that we considered the revised definition of the TFP as our Charter, which the PMBOK® Guide defines as the “authority to apply organizational resources to project activities” (PMBOK® Guide 2017, p.34). It is key to note that the 2018 Farm Bill text provided not only the authority for this work, but also the parameters for the work, namely as to what the Secretary must consider in the TFP reevaluation.

FNS Formally Identified a Project Manager

GAO states that “FNS did not have a dedicated project manager to lead the 2021 TFP reevaluation.” As noted in documents provided to GAO and in interviews, a senior leader from the FNS Office of Policy Support (OPS) was the Project Liaison – only different in name to a Project Manager. The project manager as defined in the PMBOK® Guide, Sixth Edition (p.52) is responsible for leading “the team that is responsible for achieving the project objectives”. Additionally, a leader from the FNS Center for Nutrition Policy and Promotion (CNPP) was responsible for the technical aspects of the update. FNS notes that the OPS senior leader was assigned on special assignment to the TFP Reevaluation Team concurrent with the decision to expedite the reevaluation. This reflected FNS’ commitment to ensuring that the

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<sup>3</sup> Section 3(u) of the FNA, as amended by the 2018 Farm Bill

<sup>4</sup> PMBOK® Guide, 6th Edition, 2017

project had a designated leader to ensure that the objectives were met, and also served to add additional resources and expertise to the team.

#### FNS Developed a Project Management Plan

The GAO report states that “FNS Officials did not develop a comprehensive project management plan” and proceeds to name 10 subplans as “important project documents” that “were missing.” The original TFP project management plan was shared with GAO and included the scope, tasks, staff assigned, and resources needed along with identified threats to project success should those resources not become available. This plan did not identify the cost of the project because the TFP reevaluation is not funded as a separate budget line within FNS but is instead included in the overall CNPP budget for staff and administration.

In sum, FNS conducted the reevaluation of the TFP using key project management principles. FNS is committed to continuous improvement and will follow the PMI recommendations to continue to examine project management and planning processes and practices that meet the unique needs of each effort to reach the full value delivery landscape.

### 3. Commitments for The Future

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#### FNS Will Incorporate More Peer Review

USDA appreciates GAO’s feedback and concurs that increased documentation of the Peer Review Plan for TFP and inclusion in the annual FNS Peer Review Plan on the FNS website is a good practice. While in the past FNS used the USDA Peer Review Guidance in its work, FNS will commit to developing a formal FNS Peer Review Guidance document, applying the USDA Guidance. In addition, FNS is committed to further clarifying the decision-making process for which scientific projects will be subject to Peer Review, how those decisions will be made, and the process for Peer Review. A future analysis of the cost of the TFP in Alaska and

Hawaii will include external peer reviewers with demonstrated knowledge and expertise in price indexes, scanner data, food prices in Alaska and Hawaii, and the TFP.

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#### FNS Commits to Publishing data and code

USDA appreciates and agrees with GAO's recommendation that USDA publish the computer code and data necessary to replicate the analyses. Just after publishing the TFP report, USDA posted an online supplement on its website with all data and information necessary for analysts to reproduce the model. USDA is committing to publishing the code and will also do so on future reevaluations. The code is currently available upon request. We are also preparing an updated online supplement to make it more accessible to new users and expect to publish it within the next 30 days. We will also include in the methodology section of future reports the quality assurance processes used, including review of computer code.

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Conclusion

The 2018 Farm Bill directed FNS to reevaluate the TFP based on four elements: current food prices, food composition data, consumption patterns, and dietary guidance. FNS used a scientific, data-driven approach to reevaluate the TFP to reflect the price of a practical, cost-effective, nutritious diet in today's current conditions. FNS took a careful and considered approach, updating the data and the optimization model when aligned with the 2018 Farm Bill mandate and where the body of scientific evidence was clear and convincing in support a change. The result aligns with the authority and directive in the 2018 Farm Bill, enacted by Congress and fulfills the goals supported by the President to reflect a practical, cost-effective, diet based on consumer consumption and aligned with dietary guidance.

Thank you again for the opportunity to review and respond to the GAO draft report.

Sincerely,

Cynthia Long  
Administrator, FNS



## GAO's Comments

1. **Assessment of results.** In its comments, FNS stated that the “increase in the TFP was meaningful but modest.” FNS also noted that some research suggests the revised TFP is “too low.” The objective of our review was not to determine whether the resulting 21-percent increase in SNAP benefits was too high, too low, or appropriate. Our focus was on the process and methods USDA used in the reevaluation. We maintain that USDA should develop and document a process to ensure that TFP reevaluations follow the project management practice of establishing a key document at the start of a project, such as a charter, that includes measurable objectives and metrics for success in advance so that the reevaluation team and others can verify that project goals have been achieved.
2. **Overall documentation and transparency.** FNS stated that the TFP reevaluation is well documented and transparent, and that the 2021 TFP report provided more transparency regarding analyses and considerations than reports for prior reevaluations. The evidence provided to us during the course of our review does not support this statement for the following reasons:
  - a. First, we were not able to compare the quality of documentation and transparency for the 2021 TFP reevaluation to prior reevaluations because FNS officials told us that documentation from prior reevaluations had been destroyed under USDA’s document retention policy. Further, FNS officials told us that most of the officials who worked on prior reevaluations were no longer with the agency and could, therefore, not speak to processes and procedures.
  - b. Second, as we note in the “Agency Comments and Our Evaluation” section, inadequate documentation made it

difficult to independently evaluate the 2021 TFP reevaluation process.<sup>1</sup>

- c. Third, regarding transparency, as described in our report, the data made publicly available by FNS lacks sufficient detail for a third party to reproduce the TFP. For example, it does not provide a complete accounting of the alterations made to these data sources before the TFP is calculated, which would make it difficult for a third party analyst to assemble an analytical data set that matches the one FNS used. Further, FNS does not publish the computer program code the team used to calculate the TFP Market Basket, or a clear and concise list of all TFP constraints and their adjustments. However, in its comments, FNS indicates it plans to publish the computer code and data necessary to replicate the TFP and update its online supplement to make the material more accessible to new users. Taking these steps in response to our recommendations will improve transparency for the TFP reevaluation.

3. **Documentation of project management.** FNS said that officials employed management controls and sound project management principles in the reevaluation. However, we did not receive documentation of any specific management controls—such as supervisory review, controls over information processing, establishment and review of performance measures and indicators, and segregation of duties—that FNS used during the reevaluation. Similarly, FNS did not provide documentation of any particular project management principles or standards that they used to guide the reevaluation. Rather, officials provided evidence of the limited use of some leading practices, such as a project schedule, which we explain in our report. Further, FNS officials acknowledged in interviews during the course of our review that they could improve documentation, such as by creating a checklist of required quality assurance activities.

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<sup>1</sup>According to *Standards for Internal Control in the Federal Government*, “effective documentation assists in management’s design of internal control by establishing and communicating the who, what, when, where, and why of internal control execution to personnel. Documentation also provides a means to retain organizational knowledge and mitigate the risk of having that knowledge limited to a few personnel, as well as a means to communicate that knowledge as needed to external parties, such as external auditors.” Further, USDA’s Departmental Regulation DR1110-002, “Management’s Responsibility for Internal Control” requires agency officials to establish internal controls based on federal internal control standards.

4. **Project timeline.** FNS stated in its comments that the reevaluation team split the original project plan into two phases—deferring the evaluation of the TFPs for Alaska and Hawaii—to meet an ambitious reevaluation timeline. This explanation is not consistent with the documentation and testimonial evidence we received from FNS during the course of our review. Specifically, the original project schedule that FNS provided dated February 2021 did not include completing TFP evaluations for Alaska and Hawaii. Further, this original schedule noted that reevaluations for the two states would be completed *after* a February 2022 publication of the TFP. Furthermore, in interviews, FNS officials did not mention deferring the TFPs for Alaska and Hawaii as a part of the strategy for reducing the overall timeline for the TFP reevaluation by approximately 6 months.
5. **Analytic standards.** FNS wrote, “As a result of the COVID-19 pandemic and related economic fallout, rates of food hardship were quite high. USDA sought to complete the core reevaluation work in an expedited manner without compromising our analytic standards.” As discussed in our report, FNS did not provide GAO with evidence or documentation of its analytic standards and how they were operationalized during the reevaluation.
6. **Validity of model.** FNS stated in its comments that we had a fundamentally different perspective on the approach for the 2021 TFP reevaluation, and that we viewed the reevaluation “as an opportunity to comprehensively reassess and possibly redesign the TFP methodology.” That is not our perspective. We do not take a position in our report on the overall validity of the model, and we did not suggest a redesign as this was beyond the scope of our review.<sup>2</sup> We assessed the methodological decisions FNS made during the reevaluation based on the evidence provided.
7. **Computational errors.** FNS alleged “several serious computational errors” related to our work with the model and its underlying data. Our report was subject to GAO’s robust quality assurance framework, in which, among other things, all of our analyses are checked and verified by an independent analyst who was not involved in the audit. This process is thoroughly

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<sup>2</sup>Our research objectives for this work were to examine: (1) USDA’s administrative process for reevaluating the Thrifty Food Plan in 2021 and the extent to which the process employed leading project management practices in planning the reevaluation; (2) the extent to which USDA gathered and analyzed external input to inform the 2021 Thrifty Food Plan reevaluation; and (3) how the methodology and results of the 2021 Thrifty Food Plan reevaluation compare to methodological standards.

documented. Further, we shared our analyses with FNS in an exit conference and by providing a draft report for review and comment. We made minor adjustments as necessary based on comments we received. Specifically, FNS's technical comments suggested some adjustments to language and numbers in the draft report that led us to make minor edits for clarity and accuracy—however, none of the edits we made materially affected our findings, conclusions, and recommendations.

8. **Economic analysis definition and criteria.** FNS stated in its comments that GAO's Assessment Methodology for Economic Analysis is an inappropriate standard to apply to the TFP reevaluation. As noted in the "Agency Comments and Our Evaluation" section of our report, we stand by our decision to evaluate the TFP reevaluation as an economic analysis. We chose to apply these standards because FNS officials did not identify any quality assurance standards of its own that were applicable to the TFP reevaluation. Specifically:
- a. In December 2021, we requested documentation of any USDA or FNS standards or guidelines that apply to the TFP. FNS's written response to this request was "N/A."
  - b. In February 2022, we asked in an interview if the TFP reevaluation team was aware of any specific quality standards applicable to the TFP. Officials said they were not aware of any written USDA policy or guidance describing a quality assurance framework applicable to the TFP update. FNS officials also stated that they do not have a formal internal quality assurance process and that they did not formally document their coordination with stakeholders or other steps they took to ensure quality.
  - c. The same month, we made the FNS reevaluation team aware of the criteria we were using by describing how we were applying these standards and sending them a copy of GAO's published Assessment Methodology for Economic Analysis and examples of the evaluation rubric we were using that operationalized these standards. They did not at that time, nor at any time until late October 2022, express the opinion that our economic analysis criteria were inappropriate.
  - d. In May, 2022, FNS stated that they applied USDA's Scientific Integrity guidelines and relatedly, the Scientific Integrity Policy Handbook to the reevaluation. However,

these documents are high level and do not provide specific quality assurance steps or procedures directly applicable to the TFP. In addition, FNS did not provide any contemporaneous documentation of how they applied these standards, such as through checklists or review sheets. We asked for contemporaneous documentation that the team was made aware that these standards were to be applied to the reevaluation, and FNS did not provide any such documentation.

9. **Documentation of methodological decisions.** FNS stated that it made evidence-based decisions and that all decisions were documented using decision memos that included, among other things, a concise summary of the relevant data and peer-reviewed, scientific literature on the topic. As we note in the “Agency Comments and Our Evaluation” section of this report, FNS did not provide decision memos for all key methodological decisions. While the memos included a purpose, a description and summary of the issue, and a list of options, not all the memos included a specific recommendation and none documented the final decision made and by whom. Further, just one of the memos related to a key decision cited any specific research and none of the memos referenced or linked to specific, documented internal analysis conducted by FNS on the overall weight of the scientific evidence, among other limitations. For example, none of the memos related to the key decisions refer to the rapid reviews or other internal documents that may have provided specific evidentiary support to recommended methods.
10. **Food waste adjustment.** FNS stated that the decision to retain a food waste adjustment of 5 percent according to past practice was an example where the evidence did not clearly support a specific change. FNS further stated that the decision was documented in their process and in the TFP 2021 report. We discuss the food waste decision in our report as an example where the documentation provided to us did not include key elements such as a detailed analysis of options, a recommendation, and a decision. Further, the rationale provided in the report was not consistent with this documentation. Economic analyses should transparently describe the choices made and clearly communicate the reasoning behind them.
  - a. FNS provided us with a decision memo related to food waste that included various options (including keeping the adjustment at 5 percent) but the memo did not include a

thorough analysis of the options. Each option should be considered and evaluated alongside other options and subject to the same evidentiary standards.

- b. The decision memo FNS provided did not include a recommendation from the TFP reevaluation team, nor did it document the decision the agency made or the rationale behind the final decision.
- c. In the TFP report the food waste adjustment is represented as based on scientific evidence related to food waste and does not acknowledge the other policy-related factors (like cost or agency goals to reduce food waste) that influenced the decision.

11. **Analysis of convenience.** FNS expressed concern that we misunderstood the model and datasets and drew incorrect conclusions in our analysis of convenience foods included in the Market Basket. As we note in the “Agency Comments and Our Evaluation” section of the report, the point of our high-level analysis of convenience foods in the TFP Market Basket was to illustrate one potential metric for evaluation that FNS could have used to quantify the extent to which the final Market Basket met the goal of offering families access to convenience foods. We clarified in our report that there may be multiple ways to measure the extent to which the Market Basket provides convenient foods. In its comments, FNS presented its own analysis of convenience using a different metric than we did

Specifically, FNS stated in its technical comments that over 66 percent of the cost of the Market Basket was attributable to foods that are in ready-to-serve or ready-to-eat purchasable forms. However, FNS’s analysis—which was not provided during the course of our audit—does not change our findings and conclusions. FNS did not explicitly define convenience foods in the 2021 TFP report or analyze whether the final Market Basket met the goal of providing convenience foods as part of the TFP reevaluation. Identifying measurable objectives at the outset of future reevaluations—such as through a project charter, as we have recommended—will allow the reevaluation team and others to better assess whether they successfully met those objectives.

12. **Consistency with *PMBOK® Guide*.** FNS acknowledged that it did not use the specific project management standards against which GAO assessed FNS—the *PMBOK® Guide*—but asserted that officials employed project management principles fully consistent with the

guidance. However, as discussed previously, FNS did not provide sufficient documentation demonstrating that their reevaluation process was fully consistent with *PMBOK® Guide* principles and guidance. For example, as we note in our report, FNS officials did not provide documentation of quantifiable measures of success—one component of a charter—or documentation of a quality management plan for the TFP—one component of a project management plan. Moreover, over the course of our review, FNS officials indicated in interviews and writing that their documentation and practices were not consistent with *PMBOK® Guide* standards.

**Consistency with prior TFP updates.** FNS stated in its comments that the project management practices it used were consistent with practices used in prior updates. However, as we note in comment 2, we were not able to compare the 2021 reevaluation to prior reevaluations because FNS officials told us that documentation from prior reevaluations had been destroyed under USDA’s document retention policy and most of the officials who had worked on those reevaluations were no longer with the agency.

**Relevance of project management standards.** In commenting on our draft report, FNS stated that we utilized a particular organization’s approach to project management. We disagree that the standards we applied from the *PMBOK® Guide* were limited to one particular approach to project management and that the elements we selected were especially prescriptive in nature. The Project Management Institute defines the project management body of knowledge as a term that describes the knowledge within the profession of project management that includes proven traditional practices that are widely applied.

13. ***PMBOK® Guide* edition.** In its comments, FNS referred to a newer version of the *PMBOK® Guide*. As we note in the “Agency Comments and Our Evaluation” section of this report, we assessed FNS’s planning practices and documents against the version of the *PMBOK® Guide* that was current at the time of the 2021 TFP reevaluation. Accordingly, it was beyond the scope of our audit to assess the reevaluation against the 7<sup>th</sup> edition. We maintain that our findings and recommendations are valid, although we modified the language in our project management recommendations to allow FNS to adapt its approaches to the more recent version of the *PMBOK® Guide* moving forward. It is important to note, however, that the 7<sup>th</sup> edition explicitly states that nothing in that edition negates alignment with the process-based approach of past editions (page xi).

14. **Project charter.** FNS said that officials considered the 2018 Farm Bill its project charter—a position we include in our report. However, as we also note, a project charter aligned to standards in the *PMBOK® Guide* would include high-level project information about the project that complements and extends beyond the statutory text of the law. Furthermore, earlier in our review, when we asked FNS to provide any documents containing the various elements of a project charter as outlined in the *PMBOK® Guide*, FNS officials responded in writing and in interviews that the project did not have a formal charter. They explained that it was not their standard process to create such a document, and that the TFP was not a special project that necessitated one. We maintain that the 2018 Farm Bill is not a project charter, nor does it preclude FNS from developing a charter for future reevaluations.
15. **Assigned project manager.** FNS stated in its comments that it formally identified a project manager for the reevaluation—an official referred to as the “project liaison.” Indeed, we note in our report that this liaison was assigned to the reevaluation process to facilitate project coordination. We ultimately determined that the liaison did not generally meet the criteria for a dedicated project manager as specified in the *PMBOK® Guide*. Specifically, the liaison assigned was an acting deputy administrator from another division within FNS. The guide specifies that a project manager is distinct from a functional manager that leads a line of business. It also notes that project managers are generally assigned at project initiation or earlier. As we note in our report, the liaison was assigned for a temporary period, after the project had been underway for at least a month. Further, when we inquired about the project management practices for the TFP reevaluations for Alaska and Hawaii that were underway at the time of our review, officials indicated that there was no project manager or liaison assigned for those projects. We incorporated this additional information into our report to provide more details about our assessment. We also clarified that the liaison was assigned, in part, to make the acceleration more attainable and to provide additional resources to the team. Finally, the *PMBOK® Guide* explains that a project manager should assist with developing a project charter and a comprehensive set of project management plans—documents FNS did not provide. A dedicated project manager with project management subject matter expertise could assist FNS with creating these documents for future updates, as we have recommended.
16. **Project management plan.** FNS said that officials provided us with the project plan used to guide the reevaluation process and that this plan was consistent with the guidance contained in the *PMBOK®*



*Guide*. Our report acknowledges that FNS provided a project schedule—one important sub-plan within a comprehensive project management plan—aligned with *PMBOK® Guide* standards for its original February 2022 publication timeline. However, we also note that the revised project schedule FNS provided for the accelerated timeline did not align with these standards.

FNS also stated that our draft report specified 10 sub-plans that FNS was missing. This is not accurate. We asked FNS officials multiple times during the course of our review for select project plans that we identified in the *PMBOK® Guide* as especially relevant to the reevaluation process. Specifically, in our assessment and report—in addition to the project schedule—we focused on three sub-plans from the *PMBOK® Guide*: plans for risk management, quality management, and stakeholder engagement. However, FNS officials did not provide these plans. Officials explained in writing that it was not standard for FNS to create project plans that met the criteria we had described. In response to FNS’s comments, we include more detail in the report on our rationale for focusing on these specific sub-plans.

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## Appendix III: GAO Contact and Staff Acknowledgments

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### GAO Contact

Kathryn A. Larin, (202) 512-7215 or [larink@gao.gov](mailto:larink@gao.gov)

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### Staff Acknowledgments

In addition to the individual named above, Rachael Chamberlin (Assistant Director), Jessica Rider (Analyst-in-Charge), Joanna Carroll, and Morgan Jones made key contributions to this report. In addition, key support was provided by James Bennett, Charlotte Cable, Pin-En Annie Chou, Dan Concepcion, Kathleen Drennan, Alex Galuten, Nkenge Gibson, Melissa Jaynes, Sara Kelly, Benjamin Licht, Theresa Lo, Avani Locke, Robin Marion, Kathleen McQueeney, Jeffrey Miller, Rebecca Sero, Ben Theuma, and Walter Vance.

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Washington, DC 20548

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## Strategic Planning and External Liaison

Stephen J. Sanford, Managing Director, [spel@gao.gov](mailto:spel@gao.gov), (202) 512-4707  
U.S. Government Accountability Office, 441 G Street NW, Room 7814,  
Washington, DC 20548



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