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Dear Ms. Walker and the federal Food Service Guidelines team,

On behalf of Friends of the Earth (FOE), I appreciate the opportunity to provide responses to questions seven and eight from the RFI for solicitation number: FY15WellnessAmenityProgram regarding the 2011 *Health and Sustainability Guidelines for Federal Concessions and Vending Operations* ("the federal food service guidelines").

Friends of the Earth, a non-governmental organization with more than 400,000 supporters, is the U.S. voice of Friends of the Earth International, a federation of groups working in more than 70 countries on today's most urgent environmental and social issues. Our organization works at the nexus of environmental protection, economic policy and social justice to transform the way our country and the world value people and the environment. Our current campaigns focus on promoting clean energy and solutions to climate change, ensuring the food we eat and products we use are sustainable and safe for our health and the environment, and protecting marine ecosystems and the people who live and work near them. With offices in Washington, D.C. and Berkeley, CA, and members in all 50 states, we urge policymakers to defend the environment and work towards a healthy environment for all people.

We commend the U.S. General Services Administration (GSA) and the Department of Health and Human Services (HHS) for their visionary leadership in developing the 2011 Health and Sustainability Guidelines for Federal Concessions and Vending Operations. These guidelines effectively synthesize key health advice relevant to the 2010 Dietary Guidelines for Americans (DGA) and make important recommendations for food service providers on the topics of health, local agriculture and resource conservation. The sustainability considerations in the 2011 federal food service guidelines are an important first step in supporting Americans' long-term health and protecting the natural environment.

However, one major shortcoming of the current guideline is its failure to incorporate specific guidance to advance the 2010 DGA's recommendations around more plants and less meat consumption. Given the compelling health, environmental and food security benefits of a diet lower in animal foods presented in the 2015 Dietary Guidelines Advisory Committee (DGAC) report, as well as the 2010 DGA recommendation of limiting red meat consumption to 1.8 ounces per person per day, **Friends of the Earth recommends that the next iteration of the federal food service guidelines include strong and clear guidance for prioritizing menu offerings that** emphasize plant-based foods and smaller portion sizes of animal foods**, especially red and processed meat.** With cost-savings from purchasing *less* meat, vendors should strive to purchase *better* meat.[i]

In the last five years, several healthy and sustainable food guidelines and principles for institutional food service have been introduced to drive healthier choices and sustainable production practices that enhance

[i] Certified Organic or Grass-Fed, Animal Welfare Approved, Global Animal Partnership (at least step 2) and/or Certified Humane Raised and Handled

social and environmental benefits as well as economic opportunities for farmers and local communities.[ii] To the extent possible, we urge you to align the federal food service guidelines with these groundbreaking guidelines, giving particular attention to the Good Food Purchasing Policy —approved by the Los Angeles City Council and LA Unified School District in 2012. These guidelines govern the 127 million meals served annually at LAUSD as well as the city of Los Angeles' food purchases. At least six school districts will adopt the policy this coming year. Below we provide detail and justification for a set of sustainable food purchasing recommendations which are critical to building a food system that promotes human health, protects natural resources, safeguards animal welfare and improves workers' conditions.

- We strongly urge you to specify in food service and food vendor bids and contracts--that preference will be given to companies that have a demonstrated strategy to scale back purchases and offerings of animal products and increase plant-based foods and menu items over time, including a plan for tracking and/or measuring and reporting on these changes.

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- It is essential to reduce the amount of meat and dairy served, especially red and processed meat. This is best accomplished through:
    - Reducing portion sizes for all animal products served
    - Minimizing processed meat offerings
    - Providing vegetarian and vegan entrée options at all times

- When used, at least 20% of all animal products sourced should come from producers that that meet sustainability and animal welfare criteria under credible third party certifications (see footnote i) and by 2020, 100% of meat should be sourced from suppliers who do not routinely administer growth hormones, antibiotics or beta-agonists to the animals.

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- Certified Organic and/or verified sustainable food[iii] should be available at every meal.

- Preference should be given to food service operators who have strong and proven systems and methods for minimizing food waste, including offering smaller portion sizes.

- Sourcing guidelines must incorporate worker justice concerns across the food chain as a key element of supporting a healthier, more equitable and sustainable food system.

We applaud your leadership in crafting guidelines that address health and sustainability. We hope the next iteration of the *Health and Sustainability Guidelines for Federal Concessions and Vending Operations* will work even better to protect natural resources, enhance animal and worker welfare and promote people's health. Please address any questions you may have to me.

Sincerely,

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[ii] Good Food Purchasing Policy, Association for the Advancement of Sustainability in Higher Education Food Guidelines, Real Food Challenge Guidelines, Menus of Change principles, Health Care Without Harm's Healthy Food in Health Care Guidelines

[iii] i.e. Fair Trade Certified, Food Alliance certified, Certified Naturally Grown, Biodynamic Certified, Rainforest Alliance, Quality Assurance International, Food Justice Certified by the Agricultural Justice Project, Bird Friendly (coffee only), Protected Harvest Certification, Equitable Food Initiative Certified

Section 1: Response to Question 10

*Question #10: What experiences have organizations had in developing and implementing guidelines for **non-federal** food service settings that could inform the update of the Guidelines? Please provide comments, including nutrition, food sourcing, waste management, facility efficiency, marketing, and strategies to encourage the purchase of healthy foods and beverages.*

Both at Friends of the Earth and in my previous work, I have been involved in a number of efforts to craft food service procurement guidelines that promote people's health and benefit local economies, animal welfare and the planet. Prior to Friends of the Earth, I spent two years as a consultant with the Green Purchasing Institute (now renamed the Responsible Food Purchasing Network) where I worked with a number of cities and counties, including San Francisco and San Jose, to develop healthier and more sustainable purchasing guidelines. I also provided input into Health Care without Harm's *Healthy Food in Health Care* food service guidelines. While serving on the Oakland Food Policy Council's procurement working group, I helped develop food service guideline recommendations for the city of Oakland, and advised on the Los Angeles Food Policy Council's Good Food Purchasing Principles that have been adopted by Los Angeles and the LA Unified School District. Our experience with procurement informs the following specific recommendations for the next iteration of Federal Food Service Guidelines.

Section 2: Specific Recommendations for Federal Food Service Guidelines

Just as the federal government has driven powerful market change and by enacting green procurement policies for bio-based products and energy efficient items, it can have a huge impact on the food system by enacting stronger healthy and sustainable food procurement policies. We believe that the next version of the *Health and Sustainability Guidelines for Federal Concessions and Vending Operations* should reflect the latest scientific evidence presented in the 2015 DGAC Scientific Report and take into the account the following:

A) Food security is a fundamental basis of nutrition. Food choices today directly impact the food security of current and future generations.
B) There is overlapping and strong scientific evidence that a more plant-centered, less resource-intensive diet is better for the environment and our nation's health outcomes, all while generating large cost savings and enhancing food security.
C) The public overwhelmingly supports guidelines that will promote sustainable food consumption, including less meat and more plant-based protein in their diets.
D) There is a strong business case for including health and sustainability considerations in food service guidelines.

The 2011 guidelines are a great step forward in acknowledging the vital links among the food we eat, the long-term viability of our natural resource base, local farming communities and our health. We believe that they can be significantly strengthened to drive healthier choices, promote greater food security and support a more sustainable food system by incorporating the following new and/or modified recommendations.

<u>Preference for Food Service Bids that Demonstrate Meat Reduction Strategies</u>

We strongly urge you to specify in food service and food vendor bids and contracts-- that preference will be given to companies that have a demonstrated strategy to scale back purchases and offerings of animal products and increase plant-based foods and menu items over time, including a plan for tracking and/or measuring and reporting on these changes.

Organic and Local

We applaud the 2011 federal food service guidelines for its strong support for organic and local food and urge a few modifications. The first is to establish more specific guidance around the definition of local and regional. We suggest a definition of local as grown, produced or harvested within a 200-mile radius in accordance with the Good Food Purchasing Policy. Regional could refer to food grown, produced, or harvested in the state or in contiguous states. Second, we would suggest that you separate organic and local recommendations from each other. Local does not necessarily mean sustainable. Local and regional food procurement is most important for the economic sustainability of communities, while organic and sustainable food production is most important for human and environmental health.

Protein Foods:

1. Make it "Standard" that at least one vegetarian and one vegan (meat and lacto-ovo free) entrée must be offered every meal.
2. In accordance with the 2010 DGA,[4] when offered, serving sizes of red meat should aim for .6-1.2 oz per meal and should never exceed 1.8oz in one serving.
3. When offering meat options, always include at least one entrée that features meat and/or poultry as a condiment rather than the "main" dish.
4. Make it "Above Standard" that a meat and dairy free entrée is discounted or featured in some other prominent way at each meal.
5. When offering animal product options, at least 20 percent must be products that adhere to verifiable welfare standards: Animal Welfare Approved, Global Animal Partnership (at least Step 2) and/or Certified Humane Raised and Handled.
6. By 2020, all animal products served should be produced without the routine use of antibiotics, hormones and other growth promoters, including beta-agonists.[5]
7. When offering meat and dairy options, at least 20 percent should be certified organic or 100 percent grass-fed.
8. When fish is served, exclude fish species identified as most "at risk" by the Marine Stewardship Council and Monterey Bay Aquarium's Seafood Watch and give preference to fish derived from verified sustainable sources, including assuring at least 20 percent of seafood purchases are from verified sustainable sources.

General Food:

Standard Criteria

1. At least 20 percent of the product line be certified organic or be sourced from a farm that is in transition to organic.
2. At least 25 percent of the product line be locally or regionally produced, with at least 15 percent from local sources.

Above Standard

[4] The 2010 DGA guidelines recommend that total intake of red meat not exceed 1.8 oz a day. Therefore we suggest that serving sizes of meat not exceed the daily recommendation and should aim for substantially smaller portion sizes per meal, considering that individuals will likely eat meat at more than one meal per day.

[5] Given supply constraints, we support the idea of phasing in this criteria over time with specific targets (e.g. 20% by 2016; 40% by 2017; 80% by 2019 and 100% by 2020)

1. At least 40 percent of the product line be certified organic or be sourced from a farm that is in transition to organic (or) documented sustainably produced[6]
2. At least 40 percent of the product line be locally or regionally produced, with at least 20 percent sourced from local producers.

Dairy/Yogurt/Cheese/Fluid Milk:

Standard Criteria

- If serving dairy-based milk, offer at least one **organic** non-dairy "milk" beverage option.

Beverages:

Standard Criteria

- If juice is offered, offer at least one **organic** 100% juice option.
- Drinking water, preferably chilled tap, must be offered at no charge at all meal service events.

A Valued Workforce:

Standard Criteria

- Give preference to suppliers that demonstrate that they provide safe and healthy working conditions, fair compensation, and a voice at work for all food chain workers and producers from production to consumption.
- Vendors and suppliers sign in writing that they comply with state and local labor laws in countries where they produce goods, as well as the core standards of the International Labor Organization (ILO)[7]
- If vendor and/or suppliers are found to have health & safety and/or wage & hour violations within the past 5 years, purchaser requests information from that supplier about steps taken to mitigate past violations and prevent future violations.
- Choose food and drink products from suppliers that pay a fair price to producers (one that covers costs of production, including a fair wage for workers)

Above Standard:

- Comply with above standard and at least 5% annual average of total cost of food purchases comes from suppliers that meet the following criteria: a union contract for employees, OR are a worker-owned cooperative, OR have signed the Coalition of Immokalee Workers' Fair Food Supplier Code of Conduct, OR are Food Justice Certified by the Agricultural Justice Project, OR are certified by the Equitable Food Initiative, OR are Fair Trade certified with a goal of increasing to at least 15% of overall food spend by 2020.

FOE supports continued inclusion of the following recommendations:

Fruits:

Standard Criteria

- Offer a variety of at least three whole or sliced fruits daily.

[6] i.e. Fair Trade Certified, Food Alliance certified, Certified Naturally Grown, Biodynamic Certified, Rainforest Alliance, Quality Assurance International, Food Justice Certified by the Agricultural Justice Project, Bird Friendly (coffee only), Protected Harvest Certification, Equitable Food Initiative Certified

[7] ILO Core Standards: 1) Freedom of association and the right to collective bargaining; 2) Elimination of all forms of forced or compulsory labor; 3) Abolition of child labor; and 4) Elimination of discrimination with respect to employment or occupation

- Offer a variety of seasonally available fruits.

Vegetables:

Standard Criteria

- Offer a variety of seasonally available vegetables

Other Considerations:

Standard Criteria

- Offer half- or reduced-size choices for some meals and concessions items, when feasible.

Section 3: Scientific Evidence Summary in Response to Question 11

Question #11: Do you have any additional comments or insights to share, or suggestions for items that should be added or revised in this update of the Guidelines?

See Appendix 1 for specific recommendations based on this evidence.

A) Food Security and Nutrition

Current and future food security depends on a robust and resilient natural resource base. Unfortunately, America's current food production system is grounded in resource intensive consumption and production patterns. This cycle is rapidly depleting and degrading key natural resources on which our food security and nutrition depend. Industrially produced animal products (meat, dairy, eggs) are among the most resource-intensive foods, requiring large quantities of land, water and fuel.

According to the 2015 DGAC Scientific Report:

> *"Linking health, dietary guidance, and the environment will promote human health and the sustainability of natural resources and ensure current and long-term food security. The availability and acceptability of healthy and sustainable food choices will be necessary to attain food security for the U.S. population over time."*

Yet the DGAC was not the first group of scientific experts to recognize this. Many reports published by domestic non-governmental organizations such as the Institute of Medicine, the Academy of Nutrition and Dietetics, and the National Research Council have drawn links between sustainability and nutrition.[1,2,3,4]

Federal food service should serve as the model for protecting America's resources and our citizens' health. Federal food service guidelines have a key role to play in both meeting *and shifting* consumer demand toward healthier, more sustainable options, especially more plant-based foods. As the 2015 DGAC report makes clear:

> *"Foods vary widely in the type and amount of resources required for production, so as population-level consumer demand impacts food production (and imports), it will also indirectly influence how and to what extent resources are used. Individual and population-level adoption of more sustainable diets can change consumer demand away from more resource-intensive foods to foods that have a lower environmental impact."*

B) Sustaining our Health and our Economy

The science is clear that a diet with less meat and more plants, including plant-based protein, is better for our health and the planet. Additionally, our nation's economy and productivity benefit from lower health care costs that are directly related to less consumption of animal products.

Human health and economic impacts of current meat consumption

Americans consume significantly more meat than is recommended by USDA guidelines and far more than the rest of the world,[5] despite mounting evidence of the negative health and environmental impacts of our high-meat and low-produce diet. According to the CDC, fewer than 20 percent of Americans are eating the recommended amounts of healthy plant-based foods.[6] This high consumption of industrially produced meat, especially red and processed meat, is associated with increased risks of diet-related disease (heart disease,[7] diabetes[7] and cancer[8]), large quantities of energy-intensive inputs (pesticides, fertilizer and fuel) and ingestion of harmful pesticides and cancer-causing dioxin.[9] In contrast, plant-based diets are associated with decreased risks of all heart disease, diabetes and some cancers.[10]

Importantly, there is a link between red and processed meat and cancer. There is strong evidence that diets high in red meat (beef, pork, lamb) and processed meat (hot dogs, bacon, sausage, deli meats, etc.) increase the risk for colorectal cancer.[11] Many epidemiologic studies have reported a modest but significant association between high intakes of processed meats and red meats and increases in cancer incidence and mortality in a dose-response relationship, as well as death from other causes.[11,12,13] Both the American Institute for Cancer Research (AICR)'s Recommendations for Cancer Prevention[11] and the American Cancer Society's guidelines mention the importance of nutrition, including reduced red and processed meat, and physical activity for cancer prevention.[14]

Meat contains components harmful for our health. For example, Trimethylamine N-Oxide (produced when a compound found in red meat called L-carnitine is metabolized) is associated with inflammation, atherosclerosis, heart attack, stroke and death.[15] Neu5GC, a sugar molecule found in red meat, metabolically accumulates[16] and has been found to promote chronic inflammation.[17] In addition, when meat is cooked, compounds called polycyclic aromatic hydrocarbons (PAHs),[18] heterocyclic amines (HCAs),[19] and advanced glycation end products (AGEs)[20] are formed. These compounds, which are carcinogenic, pro-inflammatory and pro-oxidative, contribute to chronic disease.

We therefore urge that the next iteration of the federal food service guidelines require food service providers to lower or even limit red meat and processed meat and to increase non-animal protein sources, such as legumes, soy products, wheat gluten, seeds, and nuts.

Such shifts are necessary not only for our physical health, but also the nation's financial health. Given that chronic, preventable diseases now account for an estimated 75 percent of all healthcare costs,[21,22] with total costs of just heart disease and stroke estimated at $315.4 billion in 2010,[23] a shift toward more plant-based foods will save the nation billions of dollars in health care costs and is essential to our nation's health and economic prosperity. (We make the business case for these shifts in part D.)

While most diners will not choose a purely vegetarian diet, it is important to emphasize that a plant-based diet is a nutritionally appropriate alternative that is beneficial to the health of Americans and the environment. The USDA,[24] Academy of Nutrition and Dietetics,[25] and other top health organizations agree that a well-planned vegetarian or vegan diet can provide all necessary nutrients and protein required for a healthy diet.

Human health impacts of industrial food animal production methods

Not all meat and dairy are created equally. Production methods have significant health and sustainability impacts. Although the evidence above strongly suggests a low-meat diet, if meat or dairy is served it should be sourced from producers protecting our health and the environment. Specifically, we need to move away from industrially produced meat to that from verified sustainable

production methods.

Claims that red meat and processed meats are "nutrient dense" are misleading because they ignore all the harmful components of industrially produced meat, which is associated with ingestion of harmful pesticides and cancer-causing dioxin,[26] According to the Environmental Protection Agency, 95 percent of our exposure to cancer-causing dioxin like compounds (DLC) come from meat, dairy, fish and shellfish.[27] The Food and Drug Administration, Environmental Protection Agency, World Health Organization and National Academy of Sciences all agree that the best way to lower personal dioxin levels is to reduce dietary exposure to dioxins by lowering animal fat intake and increasing consumption of fruits, vegetables, and whole grains.[28] The next set of federal food service guidelines should highlight the little known fact that most of our exposure to cancer-causing dioxin-like compounds (DLC) come from meat, dairy, fish and shellfish and provide suggestions for how food service providers can reduce consumption of these products.

The industrial system of food animal production is putting human health at risk due to misuse of vital antibiotics. Seventy to eighty percent of antibiotics sold[29] in the United States go toward livestock production. These drugs are often used to accelerate animal growth and prevent diseases stemming from poor diets and crowded, unsanitary conditions, rather than for treatment of sick animals.[30] Leading health agencies agree that the routine use of antibiotics is contributing to the larger problem of antibiotic resistant infections that sickened 2 million and killed 23,000 Americans in 2013.[31] In its 2013 report *Antibiotic Resistance Threats in the United States*, the CDC states:

> "Up to half of antibiotic use in humans and much of antibiotic use in animals is unnecessary and inappropriate and makes everyone less safe."[31]

Furthermore, the U.S. meat industry relies heavily on the use of growth hormones and growth promoters in beef, pork and turkey production to fatten animals as quickly as possible with the least amount of feed. While this can be economically advantageous for meat companies and producers, it also may pose serious risks to humans, animals and the environment. As described in Chain Reaction, a new report co-authored by Friends of the Earth:
"The full human health risks from hormone residues in beef are still emerging. However, human and animal studies have demonstrated that environmental exposure to hormones, even at very low levels, can interfere with natural hormone levels in the body and with hormone function, linked to adverse reproductive and other health outcomes.[32] U.S. standards for acceptable dietary intake (ADI) levels of one synthetic hormone, zeranol, are more than two and half times higher than the international standards set by the Codex Alimentarius.[33] Numerous studies have found potential links between zeranol intake and heightened risk for breast cancer.[34]

The European Food Safety Authority (EFSA banned use of hormones in beef production in Europe in 1989 due to safety concerns.[35] Ractopamine, a beta-agonist growth promoter, is linked to serious health and behavior issues in animals, including muscular skeletal tremors, cardiovascular stress, increased aggression, hyperactivity and acute toxicity.[36] Many studies show that the use of the drug has led to "downer" animals, a condition where animals are not able walk.[37]

Environmental benefits of consuming fewer animal products
Meat, dairy and egg production methods also have high environmental impacts. The science is clear that less meat production and consumption translates into significant environmental benefits including cleaner water (fewer pesticides, hormones, nitrates and manure toxins); a smaller carbon footprint; significant water savings; more habitat for bees, butterflies and other essential pollinators; and more land available for food production.

The industrial production of meat in the U.S. – annually processing 9 billion animals and producing 167 lbs per capita[31] – requires massive amounts of pesticides, chemical fertilizers, fossil fuels, animal feed, land and water. In the process, meat production generates large amounts of greenhouse gas emissions, lagoons of manure, fertilizer run-off, and other pollutants that contaminate our air and water. According to the United Nationals, animal agriculture is a major driver of climate change, habitat destruction and deforestation.[38]

Climate

On March 19, 2015 President Obama signed Executive Order (EO) 13693. One goal of this EO is to cut federal GHG emissions 40 percent over the next decade from 2008 levels. Changing the federal government's food procurement practices by reducing the amount and changing the type of meat served could dramatically increase the reduction in GHG emissions beyond the steps outlined in the EO.[39] In fact, a recent report issued by the UN Intergovernmental Panel on Climate Change (IPCC) identified the vital role that reduced meat consumption can play in mitigating climate change and addressing other environmental issues, pointing out that "changes in human diet can have a significant impact on GHG emissions."[40] One of the most important findings in the IPCC report is that "the potential to reduce GHG emissions through changes in consumption (that include some meat, fish and eggs) was found to be substantially higher than that of technical mitigation measures."[41]

Water

"In Executive Order 13514, President Obama directed the federal government to meet specific goals for improving the environmental sustainability of its operations and facilities management. Section 2(d) of the Executive Order set federal agency targets for reducing potable water consumption by 26 percent and the use of industrial, landscaping, and agricultural water by 20 percent by the end of 2020."[42]

The science is clear that plant-based proteins require far fewer resources per unit of protein.[43,44,45] *For example*, it takes 4-6 times as much water to produce a gram of beef protein as it does to produce a gram of *lentil protein.*[46] *On a per pound basis, beef requires 46 times as much water as does the same amount of broccoli.*[46] *Overall,* meat has been shown to contribute 37% to the food-related water footprint of an average American citizen.[45]

At a time when an unprecedented drought is gripping the nation's critical food producing areas, shifting diets away from animal products and reducing demand for these water intensive foods must play a key role in our efforts conserve water and to feed people in an increasingly water scarce environment. This is not just an environmental issue. This is a clear food security and nutrition issue.

Today, a quarter of California's precious and rapidly declining water supply is going to crops that are fed to animals. And in the Midwest, an even larger portion of scarce irrigation water is going to thirsty animal feed crops like corn.[47] That water would go much further if it were used to irrigate nutritious plant proteins such as legumes—or healthy crops like broccoli—which at least 80% of Americans fail to consume at adequate levels.[6]

With the acceleration of climate change, we will only have less water available for food, especially water-intensive animal based products. As the 2012 US State Department Global Water Security Assessment points out: "during the next 10 years the depletion of groundwater supplies in some agricultural areas—owing to poor management—will pose a risk to both national and global food markets."[48] This scarcity will directly affect people's ability to afford and access healthy, nutritious food.

Friends of the Earth's earlier comments to USDA and HHS on the environmental impacts of our diet choices can be found here.

Sustainable meat and dairy production

The use of more sustainable production practices is critical for safeguarding American's food supply and ensuring food security in the longer term. As the 2015 DGAC Scientific Report points out: "Meeting current and future food needs will depend on…developing agricultural…practices that reduce environmental impacts and conserve resources, while still meeting food and nutrition needs."

Besides urging less animal product consumption, it is also important for the federal food service guidelines to stress the health and ecological benefits of pasture-raised and organic meat and dairy products. When food service providers purchase less meat, they can afford better meat that has been raised on pasture and/or raised organically without the use of antibiotics, hormones, synthetic pesticides and chemical fertilizers.

As mentioned above, current production practices, especially industrial chemical-intensive, grain-fed meat production, that rely on intensive monoculture production, generates substantial greenhouse gas emissions, degrades soil, destroys biodiversity and pollinator habitats and produce significant air, land and water pollution. These impacts not only compromise our nation's ability to produce healthy and abundant food in the long term, but they also generate major costs for other sectors of the economy.

In contrast, more sustainable, humane and organic food production methods that do not rely on the routine use of antibiotics, hormones, chemical fertilizers and toxic pesticides are better for public health, workers, and the environment. Many studies have shown that organic and sustainable production methods deliver cleaner water,[49] healthier soils,[50] fewer toxins, and greater biodiversity and pollinator habitat, when compared to conventional, chemical-intensive industrial production.[51] Pastured animals are an especially integral part of a healthy agricultural system. Well-managed grazing builds healthy, fertile soil, sequesters carbon,[52] and increases the moisture-holding capacity of the soil, especially important in this time of increasing drought.

When consumed in moderation, responsibly raised meat and animal products can bring health benefits. Grass-fed and pastured meat and dairy provide a dense source for many of the shortfall nutrients identified in the DGAC's report recommendations, including calcium, iron, and A, E, and B vitamins. Grass-fed meat is leaner than that produced in the grain-fed commodity system and, in the case of both meat and dairy, the fat profile is healthier than that of its grain fed counterparts. A 2010 review of three decades of research found that grass-fed beef provides higher levels of nutrients, including Omega-3 fats, beta-carotene, conjugated linoleic acid and Vitamin E than grain-fed beef.[53] A 2013 study published in PLoS ONE found that grass-fed organic dairy has far higher levels of Omega-3 fats than grain-fed dairy.[54]

Food waste

We applaud the 2011 guideline's mention of reducing waste and urge stronger language on this issue. Reduced food waste is a key feature of more sustainable diets. Roughly 30 percent of our food ends up in the garbage, with an annual economic loss of $165 billion.[55] Informing people and institutions about how to minimize food waste is therefore one of the most important strategies for reducing the unnecessary use of water, fuel and other chemical inputs. Food service providers should be encouraged to take measures at point of choice that reduce waste as well as have easy to use mandatory composting and recycling programs.

C) The Public is Ready for Less Meat and More Sustainable Plant-Based Foods

The public overwhelmingly supported the DGA's recommendations on considering sustainability, reducing meat consumption and increasing plant-based proteins. Since the federal food service guidelines provide instruction for implementing the DGAs, it is clear that the public would similarly support such inclusions.

The public's passion around the DGAC's recommendations for less meat, more plant-based foods and sustainability considerations was reflected in the 29,000 comments submitted regarding the report—over ten times that of previous DGA publications. The majority of the comments are clearly in favor of sustainable foods, less meat and more plant-based food consumption. Furthermore, a coalition of organizations representing millions of members collected over 160,000 signatories supporting the DGAC's recommendation for a diet with more plant-based foods and fewer animal products.

In addition to the public, many major health, public interest, and environmental organizations strongly support the 2015 DGAC recommendations, as evidenced by a sign-on letter to Secretaries Vilsack and Burwell from 49 groups, including researchers from the Johns Hopkins Center for a Livable Future and Yale University Prevention Research Center.[56] Additionally, a joint statement, signed by over 100 prominent organizations and experts in support of sustainability, less meat and more plant-based foods in the DGA, was featured in full-page advertisements in the *New York Times, Washington Post* and *Politico* on March 24, 2015.[57]

In a major show of support, the health community rallied around the DGAC's recommendations. More than 700 health professionals—including experts such as Yale University's Dr. David Katz and Harvard University's Dr. Walter Willett-- signed a letter endorsing "the Dietary Guidelines Advisory Committee's (DGAC) recommendations to reduce consumption of animal foods and shift toward a more plant-based diet," as well as its "recognition of sustainability as an essential component of federal dietary guidance."

The public is ready for and wanting food service that promotes health and protects natural resources—doing so will be good for our health, the planet and your vendors' bottom lines.

D) Business Case for More Robust Guidelines on Health and Sustainability

> "The single most significant contribution the foodservice industry can make toward environmental sustainability is to reduce red meat on menus, as part of a larger shift toward more plant-based and healthy dishes."
>
> *Menus of Change, a joint initiative of Harvard University and the Culinary Institute of America*[58]

There is a strong business case for offering more healthful and sustainable choices. Consumers want healthier and more sustainable options and Table 1 shows an example list of benefits for businesses that provide them. Food service providers are increasingly recognizing this important market opportunity and their role in shifting the food system. This is evidenced by a recent survey conducted among consumers and operators that found a consensus (about three fourths of each group) that the food service industry must play a role in addressing broad issues related to public health and the environment.[58]

Table 1. BENEFITS OF SUSTAINABLE FOOD PURCHASING

As you establish your sustainable purchasing program, look for benefits on a variety of levels:

- Improve information flow and relationships with suppliers
- Meet or exceed quality and cost expectations (yes, it's absolutely possible!)
- Reduce risk or liability exposure related to environmental, social and health concerns
- Avoid negative publicity associated with purchasing "problem products"
- Reduce waste and waste disposal charges
- Contribute to the organizational mission (education or health services organizations)
- Set a positive examples for students, patients and other constituents or stakeholders
- Deliver morale and health benefits for employees and students/patients/customers
- Get credit for helping improve social and environmental performance by suppliers
- Demonstrate organizational values and improve public relations
- Realize marketing advantages over less proactive competitors

Source: http://www.aashe.org/resources/pdf/food_policy_guide.pdf

A recent study by the Hartman Group and Changing Tastes revealed that "food culture and eating norms are changing as dramatically and rapidly as the environmental and public health imperatives that are reshaping the nature of the food service industry…Today's diners prefer meals that are healthier for the environment…Their preferences match current scientific findings and are reflected in the newly released recommendations of the Dietary Guidelines for Americans [sic] Committee."[59] Most importantly, "A large share also want to eat smaller portions or smaller amounts of meat at their meals, offering an opportunity for restaurants and food service companies to also better manage highly volatile food costs; many are also willing to pay a little more for such a meal, further enhancing business benefits."[59]

Many food service providers are aware of these trends and ready to provide such options. One Datassentials study found that, "reducing the portion size of animal protein on menus is expected by nearly half of operators to increase the healthfulness of the entrees, and by over a third to increase the culinary innovation involved with the dishes."[58]

The same survey found that meals with animal protein as a garnish, rather than as a central portion, appeal to half of consumers; and more than seventy percent of consumers were concerned about transparency in food sourcing. A desire for transparency is also reflected in the survey's finding that operators were more successful in menu changes, including reduced animal protein portions, when they communicated the changes to the consumer. This research points to the important role of food service providers not only in meeting consumer demand, but also influencing consumer preference.

Consumer trends and attitudes support aligning vending and concessions guidelines with the 2015 DGAC's recommendations for more plant-based diets. While one in ten millennials follow a vegetarian diet,[60] it is not just vegetarians who are seeking healthier foods. Research suggests that 36 percent of U.S. consumers prefer milk and meat alternatives and that between 26 and 41 percent of Americans have eaten less meat over the past year.[61]

In addition to less meat, many consumers want "better" meat. The Datassentials researchers concluded that, "quality is especially important when it comes to any potential shift in value perception" and "Customers also view seasonal, fresh and local as adding value."[62] According to a Consumer Reports survey, 86 percent of consumers want meat raised without antibiotics available in their local supermarket, and more than 60 percent said they would be willing to pay at least $0.05 per pound more for it.[63] Nearly 40 percent said they would pay at least $1 more per pound.[63]

In numerous surveys, consumers have indicated serious concerns about the impacts of hormone residues in animal products. In a 2014 Hartman survey of over 1500 diners, 52 percent ranked growth hormones among the top five ingredients they seek to avoid, ahead of aspartame, artificial flavors and MSG.[8] The University of Florida Public Issues in Education (PIE) Center found that 88 percent are concerned about hormones in food[64] and a *Fortune* magazine survey found that 57 percent of consumers were concerned about hormones. [65] Such concerns have contributed to the rapid growth in the market for organic meat, which is raised without hormones.

It is clear that many consumers are ready for menu options that are better for human and environmental health. Federal food service providers have an important role to play in meeting this demand and influencing consumers toward better choices. Such changes would not only improve the health of federal employees, conserve vital resources and reduce our nation's staggering health care costs, but they also have the potential to improve food service providers' bottom-lines.

Appendix 1

This section provides links to example standards for food service as well as other helpful resources.

Good Food Purchasing Principles: These principles were approved by the Los Angeles City Council and the Los Angeles Unified School District (which serves 127 million meals) in 2012. The principles are also an integral part of a national effort around a food system that is better for health, environment, agriculture and labor sectors, with many schools in the process of adopting these guidelines.
http://goodfoodla.org/wp-content/uploads/2013/02/GFPP15-IntroBrochure.compressed.pdf

Principles of Healthy Sustainable Menus: Menus of Change is at the forefront of supporting chefs in shifting toward menus that support human and environmental health. In addition to their principles

[8] Hartman Group and Changing Tastes. (2015). *Overview: Diners' Changing Behaviors: Sustainability, Wellness & Where to Eat*. Retrieved from http://store.hartman-group.com/content/diners-changing-behaviors-2014-overview.pdf

for food service found here, they also have tips on delicious ways to reduce meat servings and change consumer behaviors and attitudes.
http://www.menusofchange.org/news-insights/resources/moc-principles/
http://www.menusofchange.org/annual-conference-info/summit-presentations/2015/#a

Real Food Challenge: Provides numerous resources targeted toward food service professionals, including guides related to building local food programs on campuses and fair trade purchasing.
http://www.realfoodchallenge.org/food-service-professionals

Association for the Advancement of Sustainability in Higher Education: *A Guide to Developing a Sustainable Food Purchasing Policy*, which offers resources for establishing goals, creating action plans, communicating accomplishments, and explains od-related claims and certifications.
http://www.aashe.org/resources/pdf/food_policy_guide.pdf
Additionally, AASHE offers specific guidance on low-impact dining here:
http://www.aashe.org/files/documents/STARS/2.0/stars_2.0.2_credit_op_7.pdf

Guidance for Leadership in Sustainable Purchasing Version 1.0: "Intended to help organizations improve the environmental, social, and economic performance within their supply chains—across the entirety of product and service life cycles—by implementing a strategic sustainable purchasing program."
https://www.sustainablepurchasing.org/guidance/.

Health Care Without Harm: Provides a range of guidance for food service providers at this link and has useful guidance for integrating sustainability into food service here.
Guidelines: https://noharm-uscanada.org/issues/us-canada/healthy-food-resources - guidesforhospitals
Integrating Sustainability Requirements Into Health Care Food Service Contracting: https://noharm-uscanada.org/documents/integrating-sustainability-requirements-health-care-food-service-contracting

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