THE MEAT OF THE MATTER:

A MUNICIPAL GUIDE TO CLIMATE-FRIENDLY FOOD PURCHASING

Friends of the Earth

RPN
Responsible Purchasing Network

ACKNOWLEDGEMENTS

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About Friends of the Earth:

Friends of the Earth U.S., founded by David Brower in 1969, is the U.S. voice of the world's largest federation of grassroots environmental groups, with a presence in 74 countries. Friends of the Earth works to defend the environment and champion a more healthy and just world. Our current campaigns focus on promoting clean energy and solutions to climate change, ensuring the food we eat and products we use are safe and sustainable and protecting marine ecosystems and the people who live and work near them. www.foe.org

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EXECUTIVE SUMMARY

Municipalities across the country are using their economic clout, political power and cultural influence to fight climate change. They are establishing ambitious greenhouse gas (GHG) emissions reduction targets and pursuing aggressive strategies, such as requiring the purchase of 100 percent renewable energy and fuel-efficient vehicles. **But one critically important sector that accounts for about one fourth of global greenhouse gas emissions has largely been ignored: food.**

A wealth of scientific research underscores the urgency of substantially reducing meat and dairy consumption, which accounts for more than half of all food-related GHG emissions. **It is clear that the world cannot meet global greenhouse gas reduction targets without curbing consumption of animal products.** High-meat-eating nations like the United States, which consumes 2.6 times more meat than the global per capita average, must help shoulder this responsibility.

As large population centers with vast purchasing power, cities and counties have a critical role to play. By reducing the amount of animal products purchased with municipal funds and serving more plant-forward options on city or county property, municipalities can cut their GHG emissions and water footprints, all while saving money and offering healthier food. Beyond leveraging their own purchasing power, municipalities can inspire school districts, private institutions, restaurants and community residents to shift their purchases towards climate-friendly food. Compared to other climate mitigation strategies, plant-forward institutional food purchasing is a relatively simple, cost-effective approach that will downsize our nation's carbon footprint while improving the health of the public.

This guide presents a menu of tools, approaches and examples, including a model climate-friendly food purchasing policy and standards, acknowledging the many ways that cities and counties can advance climate-friendly and healthy food procurement.

Part I summarizes the compelling environmental and health reasons for transitioning institutional food purchases towards more plant-based foods. Key findings include:

- The production of meat and dairy generally has much higher greenhouse gas emissions than plant-based foods.
- In order to fully account for their climate impacts, municipalities should consider upstream emissions — that is, the embedded emissions associated with the production of food purchased and served by the city or county.
- Americans are overconsuming meat, which is contributing to heart disease, diabetes, some cancers and billions of dollars in health care costs associated with these maladies. The federal government's *Dietary Guidelines for Americans* recommend a maximum of 3.7 ounces of meat, poultry and eggs a day, which is significantly less than average U.S. consumption rates.
- Water resources are at risk in our warming world hit by increasingly frequent and catastrophic natural disasters. Meat and dairy production has a harmful impact on water quality and uses substantially more water resources than plant-based foods.
- As demonstrated by the Oakland Unified School District case study, shifting to plant-forward options can save valuable tax dollars since plant-based proteins are generally less expensive than meat.
- Food waste is a substantial contributor to food-related greenhouse gas emissions. Serving more plant-based foods and smaller portions of meat and dairy will help cut waste from animal products, which account for an outsized portion of total emissions associated with food waste.
- Buying less conventionally produced meat can make it easier to afford third-party certified, sustainably

produced food. Local and organic food, in particular, can have climate benefits. An array of third-party certifications has been endorsed by leading public interest groups.

Part II provides practical policy guidance for municipalities, broken down into six steps:

Phase I: Pass a climate-friendly food procurement policy and/or standards

A 2016 U.S. Centers for Disease Control and Prevention (CDC) study found that fewer than five percent of municipalities have established healthy food service guidelines or food and nutrition standards. There is a compelling opportunity for municipalities to fill this gap by adopting purchasing policies that yield the complementary benefits of climate-friendly and healthy food.

Step 1: Establish a working group

» Build a team across agencies that includes decision-makers, advocates and other stakeholders, including public health, procurement and sustainability agency staff and a nutritionist.

» Research the municipality's procurement practices and identify food venues under municipal control, especially those that could most easily adopt climate-friendly food purchasing (e.g., concessions).

» Solicit input from employees and customers.

Step 2: Enact a climate-friendly food procurement policy

» Determine a vehicle for enactment, which could include:

- A standalone sustainable food procurement policy, such as the model climate-friendly food purchasing policy created for this guide, the Good Food Purchasing Policy or a policy modeled off of examples in San Francisco, CA, Woodbury County, IA, Cleveland, OH, Austin, TX or Malmö, Sweden;
- An environmentally preferable or green procurement policy that addresses sustainable food, such as in San Jose, CA or Washington, DC;
- A climate action plan that includes climate-friendly procurement strategies such as in Multnomah County, OR, Santa Monica, CA, Eugene, OR or Carrboro, NC and recognizes the role of reducing meat and dairy consumption in combatting climate change such as in the case of at least 17 municipalities.
- A food action plan, such as in King County, WA, Seattle, WA or Multnomah County, OR; a wellness policy, such as in Brentwood, CA, San Mateo County, CA or Kansas City, MO; or a comprehensive municipal plan such as in Austin, TX; and
- A green business program that incentivizes climate-friendly food in the private sector.

» Determine a mechanism for enacting the policy, which can include:

- Legally-binding local ordinances and executive orders;
- Integrating climate-friendly procurement in an existing policy; and
- Non-binding resolutions, such as "Meatless Mondays" proclamations, which can be a key step towards binding action in the future.

Step 3: Develop climate-friendly food standards

» Food procurement policies typically establish a broad framework for purchasing certain categories of food, such as climate-friendly, local and healthy food. Standards, such as the model climate-friendly food standards created for this guide, provide detail about how to interpret and implement the policy in terms of what is served. Developing standards may happen in concert with creating a food procurement policy or separately, sometimes even without a formal policy.

» Many municipalities, such as New York City, NY, have adopted healthy food and nutrition standards that provide an opportunity for adding climate-friendly standards, recognizing that reducing meat and dairy is an important element of both a healthy diet and a healthy planet.

- » Municipalities such as Santa Clara County, CA, Philadelphia, PA and San Diego County, CA have healthy food standards in place that promote climate-friendly food.
- » Counties, including Portland, OR, Lakewood, CO, Boulder County, CO and Philadelphia, PA, have plant-forward food guidelines that apply to caterers, government meetings and events.

Phase II: Implement the policy and/or standards

Once the policy has been created, develop an implementation plan. San Diego County, CA and Santa Clara County, CA have comprehensive plans for implementing their food standards that can serve as models.

Step 4: Develop a plan for communications and staff training

- » Communicate the new policy and/or standards to all relevant internal staff and, where appropriate, external stakeholders.
- » Conduct staff trainings on the new policy and/or standards.
- » Offer implementation tips and tools such as creative menus, customer surveys and behavioral design, marketing and educational strategies.
- » Make the business case for climate-friendly food.

Step 5: Update bid solicitation and contract language

- » Determine which contracts are top priorities and when they are up for renewal. Consider starting with the low-hanging fruit (often concessions) or launching a pilot project as an incremental step towards a municipality-wide policy.
- » Ensure that climate-friendly standards are referenced in upcoming bid solicitations for commodity contracts, food service agreements and concessions contracts. Draw from bid solicitation language from Alameda County, CA, the federal government and San Francisco Airport (SFO).
- » Make sure the climate-friendly purchasing standards are considered when bids are evaluated.
- » Finalize contract awards and monitor compliance.

Step 6: Track and report progress

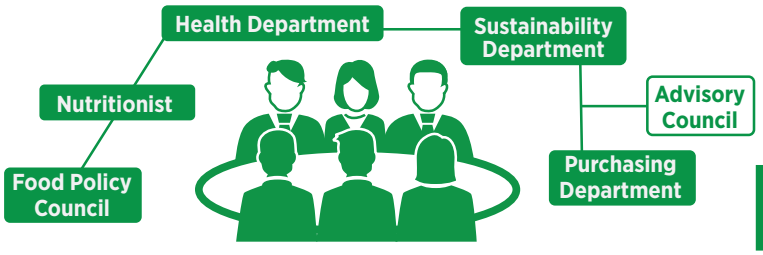
- » Tracking food purchases — and their embedded GHG emissions — is essential to understanding and communicating the benefits of a municipality's climate-friendly food purchasing policy
- » Choose a method for tracking purchases by weight and cost, with a focus on animal products. A menu-based approach is a simple and meaningful way to measure carbon footprint and cost-savings by meal.
- » Include tracking requirements in contract language to ensure that vendors provide the necessary information in a usable format.
- » Consider utilizing low-cost tracking resources.
- » Communicate the results of climate-friendly food procurement actions to facilitate future success.

In conclusion, cities and counties can make a meaningful impact — both locally and globally — by shifting their food purchases towards plant-based and plant-forward options. Whether these changes are made for health, environmental or cost-saving reasons, municipalities that serve less meat in their food service operations will experience a triple win for community well-being, local budgets and the planet.

Beyond the information and resources provided within this guide, Friends of the Earth and the Responsible Purchasing Network stand ready to support municipalities to adopt and implement climate-friendly purchasing practices.

A Step-by-Step Municipal Guide to Climate-Friendly Food Purchasing

STEP 1: Establish a working group

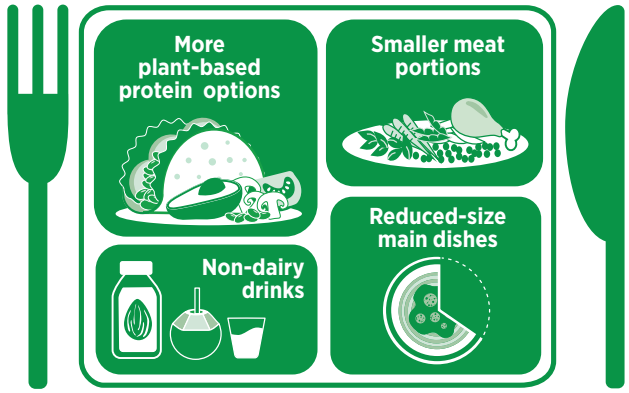


Research and Identify potential food venues

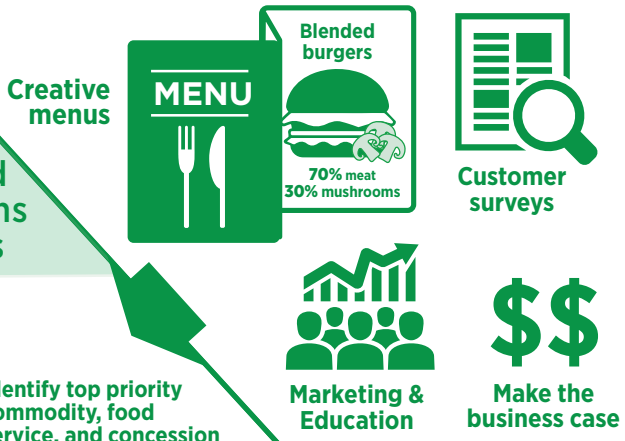
STEP 2: Enact a climate-friendly food procurement policy

Find A Vehicle + Find a Mechanism

STEP 3: Develop climate-friendly food standards

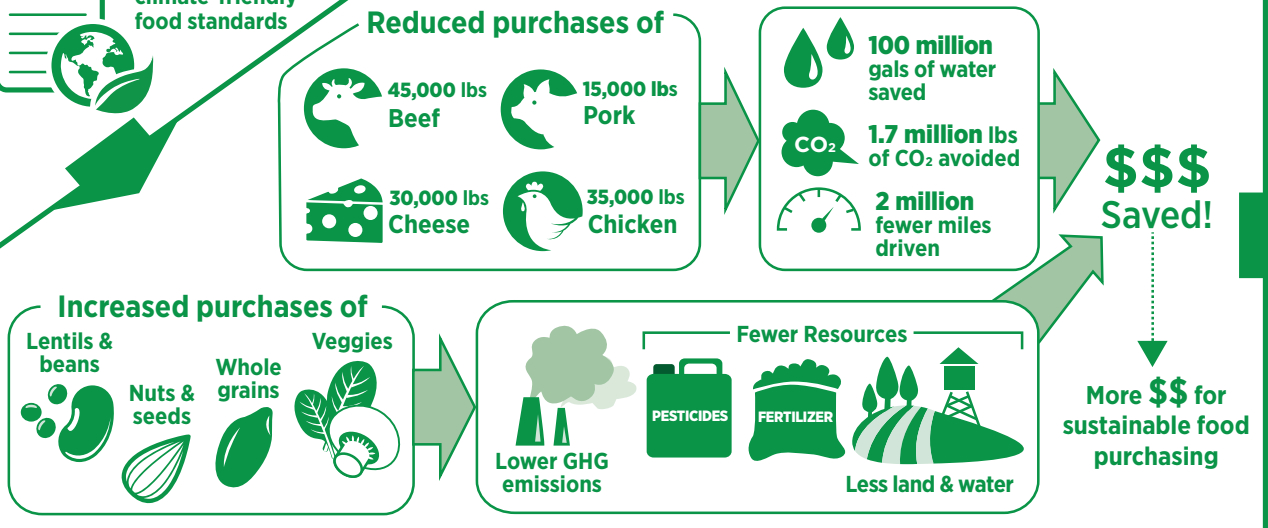


STEP 4: Develop a communications & training plan



STEP 5: Update bid solicitations &contracts

STEP 6: Track and report progress



HEALTHY PEOPLE & PLANET

INTRODUCTION

Municipalities across the country are using their economic clout, political power and cultural influence to fight climate change. They are establishing ambitious greenhouse gas (GHG) emission reduction targets and pursuing aggressive strategies, such as requiring the purchase of 100 percent renewable energy, fuel-efficient vehicles and energy-efficient computers and lighting. **But one critically important sector that accounts for about one fourth of global greenhouse gas emissions has largely been ignored: food.**[1]

A wealth of scientific research underscores the urgency of substantially reducing meat and dairy consumption, which accounts for more than half of all food-related GHG emissions.[2, 3, 4, 5, 6] **It is clear that the world cannot meet global greenhouse gas reduction targets without significantly curbing consumption of animal products**.[7] High-meat-eating nations like the United States, which consumes 2.6 times more meat than the global per capita average, must help shoulder this responsibility.[8]

As large population centers with vast purchasing power, cities and counties have a critical role to play in helping shift consumption towards foods that generate fewer greenhouse gas emissions. By reducing the amount of animal products purchased with municipal funds and serving more plant-based[i] and plant-forward[ii] options on city or county property, municipalities can significantly cut their GHG emissions and water footprints, all while offering healthier food and saving valuable tax dollars.[9, 10] Ounce for ounce, plant-based proteins are typically less expensive than equivalent animal proteins.[11]

Beyond leveraging their own purchasing power to increase healthy food options and measurably reduce their carbon footprint,[iii] municipalities can amplify this impact by inspiring and supporting school districts, restaurants, large private institutions and residents to also shift their purchases towards climate-friendly food. With nearly 50 percent of Americans' food dollars spent outside of the home, food service operators — especially those in the public sector — must make it easier for people to choose plant-forward meals that are better for their health and the planet.[12]

> **"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, an initiative of The Culinary Institute of America and Harvard University's School of Public Health**[13]

Plant-based food purchasing can build on nutrition standards (see page 30) that have already been adopted by several cities and counties. While nutrition standards typically promote more fruits and vegetables, less fat and sugar and smaller portion sizes, municipalities have an opportunity to update these standards or adopt new standards that reflect the emerging scientific consensus that a healthy diet also requires consuming fewer animal products.[iv, 14]

i "Plant-based" refers to a diet or food that is wholly derived from plants, including fruits and vegetables; whole grains; beans, other legumes (pulses), and soy foods; nuts and seeds; plant oils and herbs and spices.

ii "Plant-forward' refers to a style of cooking and eating that emphasizes plant-based foods and fewer animal products.

iii This guide uses "carbon footprint" to mean the climate impact associated with carbon dioxide emissions as well as other greenhouse gases, including methane and nitrous oxide. These emissions may occur anywhere during the lifecycle of a product including production, transportation, use and disposal.

iv The Dietary Guidelines Advisory Committee represented a widespread scientific consensus in its statement that, "A diet higher in plant-based foods, such as vegetables, fruits, whole grains, legumes, nuts, and seeds, and lower in calories and animal-based foods is more health promoting and is associated with less environmental impact than is the current U.S. diet."

Climate-friendly food purchasing can also be integrated into existing sustainable food purchasing initiatives and green purchasing policies. Many cities and counties are harnessing the power of public purchasing to establish preferences for products that reflect their values, such as energy-efficient equipment or locally produced and organic food.[15] These initiatives can generate direct benefits for community wellness, local economies, workers, farmers and the environment, and should be expanded to include climate-friendly food.

CITY OF OAKLAND

"Globally, up to 32% of GHG emissions are related to food system activities including production, transportation, processing, and storage... Significant opportunities to reduce GHG emissions associated with the food system exist in decreasing consumption of meat and food grown with intensive use of manufactured fertilizers."

–Oakland, CA's Energy and Climate Action Plan[16]

Hundreds of U.S. cities and counties have pledged to help achieve the Paris Climate Accord goal of lowering greenhouse gas emissions enough to keep average global temperatures at no more than two degrees Celsius above pre-industrial levels. Many jurisdictions are implementing innovative public transportation systems, building solar-powered buildings and transitioning away from carbon-intensive energy sources, among other things. Yet, even if all U.S. cities dramatically reduced their GHG emissions through these actions, projected global meat consumption rates *alone* would cause global GHG emissions to nearly exceed the emissions threshold by 2050 (see Figure 1, page 11).[17] Compared to other climate mitigation strategies, institutional plant-based food purchasing is a relatively simple, cost-effective strategy that will downsize our nation's carbon footprint while improving the health of our citizens.[18]

Using this guide

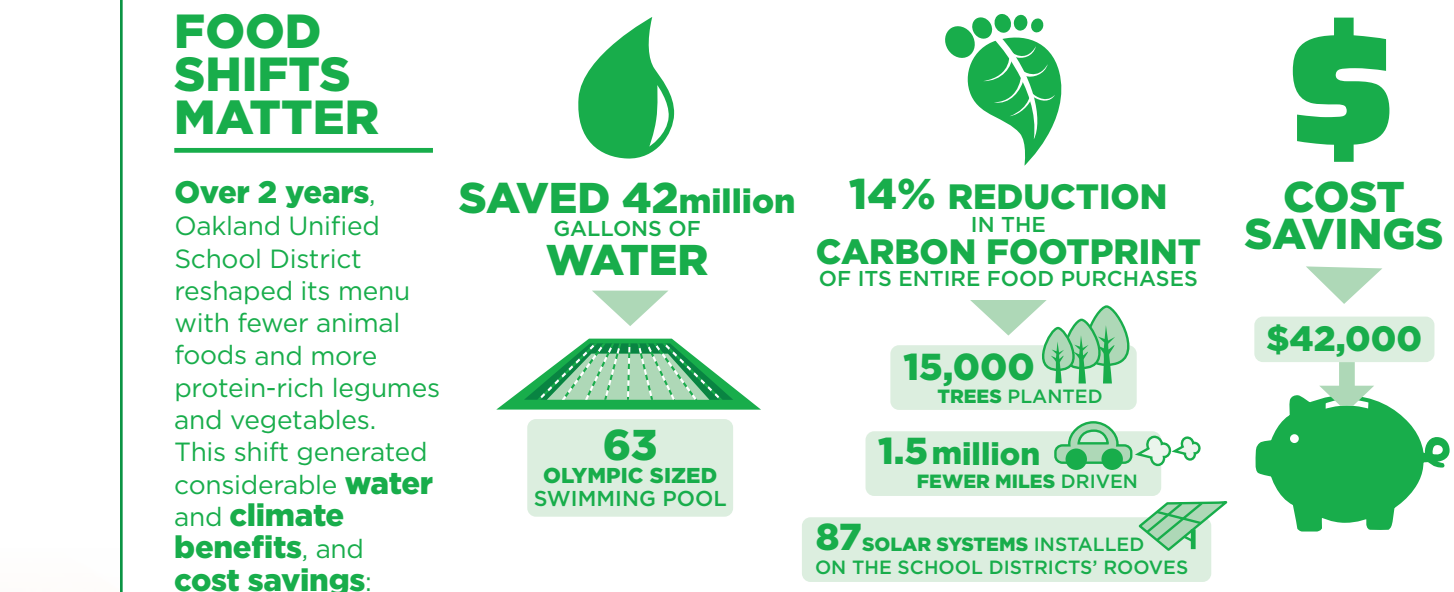
This document lays out compelling scientific arguments for shifting institutional food procurement towards plant-based options. It provides practical, step-by-step guidance for how municipalities can successfully implement climate-friendly and health-promoting policies and practices for food purchased by public institutions (e.g., hospitals, schools, childcare centers and correctional facilities) and served on municipal property (e.g., in airports, sports stadiums, parks, museums and office buildings). The guide includes numerous examples of cities and counties that are supporting climate-friendly purchasing through standalone food procurement policies, climate action plans, food or wellness policies or as part of their nutrition standards.

This guide is primarily intended to help municipal staff — particularly those whose roles relate to sustainability, food and health — and municipal leaders who are in a position to influence food purchasing policies and practices. Changes in food purchasing can happen at a comprehensive level through the adoption of a new policy across all agencies, but meaningful changes can also occur within a single agency or office, in a single municipal building or with a single concessions contract. This guide provides a variety of tools and approaches, including a model climate-friendly purchasing policy and standards (see Appendix A), acknowledging the many ways that municipalities can achieve the benefits of climate-friendly and healthy food procurement.

Finally, this guide recognizes that climate-friendly and healthy food is an issue in which the entire community has a stake. To that end, it can also serve as an important resource for advocates who want to see their local government make an impact in reducing greenhouse gas emissions, for parents who want their children to have access to healthy food, for local farmers who want to provide consumers with nutritious food and for businesses that want to lead by example with climate-friendly menus.

Food shifts matter: the power of municipal procurement

To show the power of public sector procurement, *Shrinking the Carbon and Water Footprint of School Food*, a 2017 case study published by Friends of the Earth, documents how one of California's largest school districts generated significant climate and water benefits by changing its food purchasing practices and menu design.[19] Oakland Unified School District (OUSD) slashed the carbon footprint of its food service 14 percent by reducing its purchases of animal products by 30 percent and replacing them with plant-based proteins and more fruits and vegetables.[v] This single procurement action saved the equivalent of roughly 600,000 Kg of CO_2 per year — akin to driving 1.5 million fewer miles a year or covering all of OUSD's roofs with solar panels. Oakland's initiative also cut the district's food service water footprint by nearly 6 percent — saving 7 gallons per meal, totaling 42 million gallons of water per year. This is equivalent to filling 840,000 bathtubs or taking 2.3 million fewer showers each year. While generating these huge environmental gains, OUSD increased its purchases of protein-rich legumes, fruits, vegetables and better-quality meat — improving students' diets and saving the district $42,000 annually by trimming costs one percent per meal.



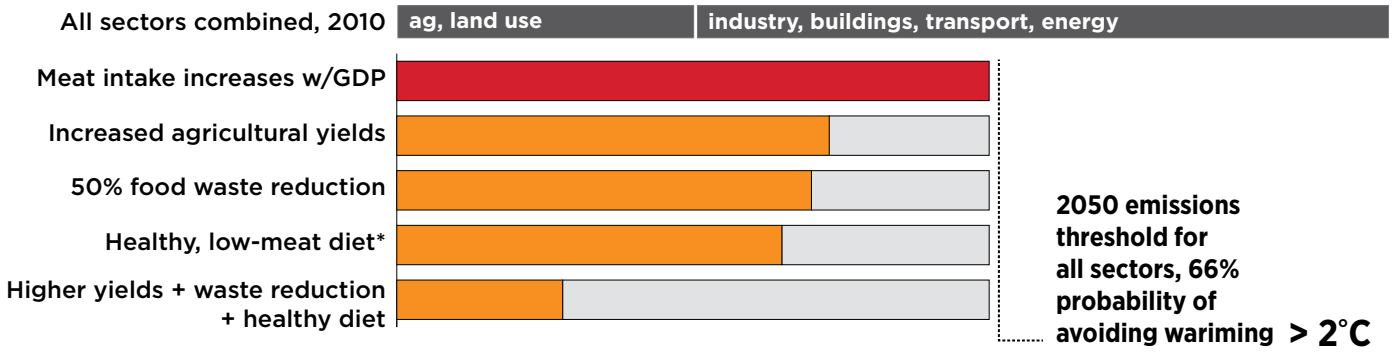
v The school district could have achieved even greater reductions in GHGs if it had focused on reducing beef purchases, which account for the highest carbon and water footprints on its menu. Most of its GHG reductions came from reduced chicken and cheese purchases.

PART I:

The case for more plant-based foods, less meat and dairy

Part I provides an overview of compelling scientific evidence that promoting diets higher in plant-based foods and lower in animal products is critical to addressing global climate change and achieving better health outcomes.

FIGURE 1: Business-as-usual meat consumption will cause global warming to nearly exceed 2050 climate goals



Note: the black dotted line represents the emissions threshold (21± 3Gt CO2e) for at least a 66% chance of keeping global warming below 2 degrees C; the black bar shows emissions from all sectors (49 Gt). Red shows business as usual scenario; orange shows mitigation potential.

*The "healthy diet" limits intake of red meat (max of two 85 g / 3 oz. portions per week), poultry (max of one 85 g / 3 oz. portion per day), dairy, eggs, sugars, and oils to levels recommended by health organizations (e.g., WHO, FAO, American Heart Association, Harvard Medical School), and sets a minimum for fruit and vegetable intake.

Source: Reprinted from Kim, B., et al. (2015). *The importance of reducing animal product consumption and wasted food in mitigating catastrophic climate change*. Johns Hopkins Center for a Livable Future Report prepared for United Nations Conference of the Parties 21 (COP21)., using data from Bajželj B, et al. (2014) Importance of food-demand management for climate mitigation. *Nature Climate Change* 4(10):924-929. doi:10.1038/nclimate2353

A. Eating more plant-based foods is essential to meeting climate goals

While improved agricultural production methods have been the primary focus for mitigating agriculture's impact on climate change, there is an emerging consensus that supply-side mitigation strategies alone cannot contain the increasing GHG emissions associated with the projected rise in meat consumption.[20,21] An effective solution must go beyond production and address consumption. The United Nations Intergovernmental Panel on Climate Change (IPCC) found that reducing consumption of animal products[vi] is one of the highest-impact strategies for mitigating agriculture's harmful effects on the climate and other aspects of our environment.[22]

Moreover, replacing a significant amount of the meat and dairy in our diets with plant-based foods is essential for the world to meet the historic 2016 Paris Climate Accord goals of lowering greenhouse gas (GHG) emissions enough to keep average global temperatures at no more than two degrees Celsius above pre-industrial levels.[23, 24]

vi This guide will use "animal products" to refer to meat, poultry, dairy, eggs and seafood. Certain animal products such as beef, lamb, farmed salmon and cheese will have higher GHG emissions than others, such as eggs, milk and certain types of fish. See Appendix E for a chart comparing GHG emissions by specific food type.

1. Animal products generate higher emissions than plant-based foods

Food production generates about one fourth of all global GHGs, with livestock responsible for more than half of those emissions.[25, 26] When including the additional emissions related to processing, transporting, storage and managing waste, the food system contributes up to 30 percent of global GHG emissions.[27, 28] **In total, livestock production accounts for about 14.5 percent of global GHG emissions, which is more than the tailpipe emissions from all of the cars, trucks, trains, buses, boats and planes across the globe.**[29]

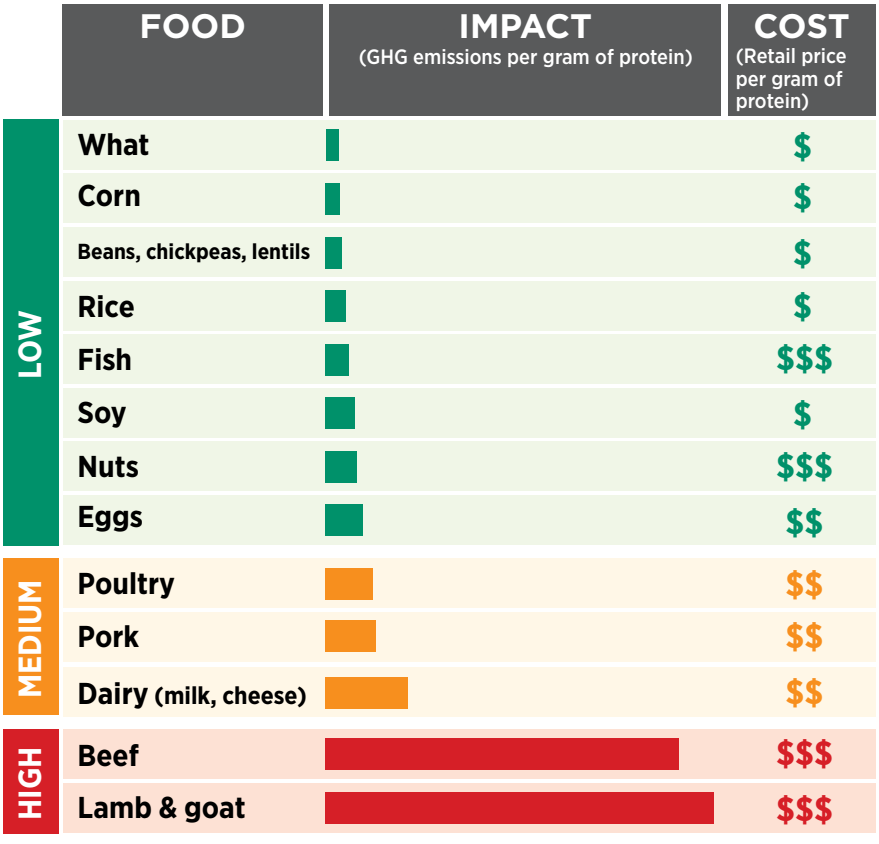
Meat and dairy products generally emit significantly higher emissions than plant-based alternatives. This is primarily due to nitrous oxide (N_20) emissions from feed production as well as methane (CH_4) emissions from enteric fermentation and waste management. Nitrous oxide and methane are up to 298 and 36 times more potent gases than carbon dioxide, respectively.[30] As shown in Figure 2 below, beef, cheese and pork have the highest emissions per gram of protein. Pound for pound, beef is roughly 13 times as carbon-intensive as tofu and 25 to 34 times as carbon-intensive as beans and lentils.[31] For a table of relative greenhouse gas emissions of protein foods by weight, see Appendix E.

The West Coast Climate and Materials Management Forum — an initiative comprised of government agencies at the federal, state and local levels — promotes the procurement of low-carbon food products as a priority climate protection strategy in its Climate-Friendly Purchasing Toolkit.[32] Specifically, it recommends the purchase of "fewer high-carbon foods, based on the general life cycle information that is available" and suggests that "taking a look at options for non-animal protein is a good place to start."[33]

2. Accounting for embedded emissions from food is critical to addressing community climate impacts

A municipality's influence on the environmental impacts of food production extends far beyond its borders. When calculating its full climate impact, a municipality must account for direct emissions from food production occurring within the city as

Figure 2: Greenhouse gas impact of select foods by gram of protein



Source: Adapted from Protein Scorecard. (2016). World Resources Institute. Retrieved from www.wri.org/resources/data-visualizations/protein-scorecard

well as embedded — or "scope 3"[vii] — emissions associated with the production of the food and other goods that are *consumed* in the municipality, even if they are not produced there. These are also known as "upstream emissions." While there are several innovative initiatives underway to better account for indirect GHG emissions in cities such as **Vancouver**, **BC**, **Portland**, **OR**, **San Francisco**, **CA** and **Austin**, **TX**, embedded emissions are not commonly accounted for in reporting systems and thus typically have not yet been integrated into municipalities' plans for reducing their GHG emissions. Reducing the consumption of high-carbon foods in large population centers will translate into lower production of GHG-intensive foods and lower overall emissions across the world.[34]

"Residents of Multnomah County can reduce the impact of food choices on climate change — and improve personal, environmental and economic health — by choosing 'low-carbon' foods, such as fresh fruits and vegetables. Lifecycle analysis shows that beef, cheese, pork and farmed salmon generate the most carbon emissions per ounce."

—Portland and Multnomah County, OR's Climate Action Plan[35]

3. Fewer purchases of animal foods means fewer GHG emissions from wasted animal products

A new book, *Project Drawdown*, evaluates 100 strategies to combat climate change and ranks reducing food waste as the third most important strategy.[36] While meat is wasted at lower rates than plant-based products by volume (15 percent of total global food waste), meat accounts for about one third of food waste-related GHG emissions due to its higher embedded emissions from production.[37] Fewer purchases of animal foods and smaller meat portion sizes will help to reduce waste from these GHG-intensive foods.[38] The West Coast Climate and Materials Management Forum's Climate Action Toolkit highlights effective ways municipalities can reduce GHG emissions from food waste, including through purchasing practices. While food waste reduction strategies are outside the scope of this report, ReFed takes a data-driven approach to identifying solutions for reducing food waste for businesses and governments. The Environmental Protection Agency has an extensive list of food waste reduction resources for K-12 schools that could be applied to other institutional settings.

B. Beyond climate protection, plant-based foods deliver health and environmental benefits

Municipal governments are charged with protecting natural resources as well as promoting the health and safety of the public. Fortunately, promoting a plant-forward diet is aligned with both of these objectives.

1. Plant-based menus are a triple win for food security, health and environment

The U.S. Dietary Guidelines Advisory Committee (DGAC) — experts appointed by the federal government to review the latest nutrition science and make recommendations for the *2015-2020 Dietary Guidelines for Americans* (DGAs) — recognized the connection between food security and environmental protection in its federal dietary guidance document: "Linking health, dietary guidance, and the environment will promote human health and ensure current and long-term food security."[39]

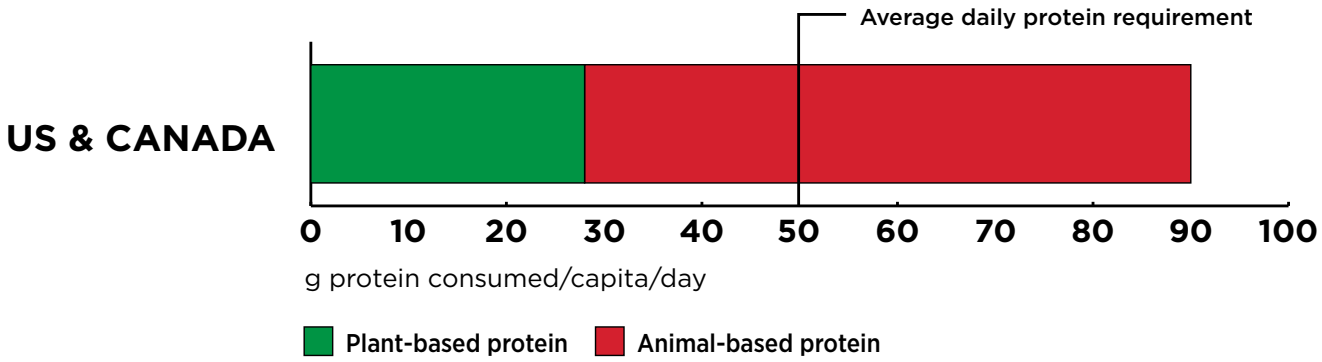
In 2015, the U.S. Conference of Mayors adopted a resolution supporting the DGAC's recommendations, urging "the creation of dietary guidelines that encourage Americans to adopt dietary patterns that are *higher in plant-based foods and lower in animal-based foods than current average American diets* [emphasis added], as such patterns have been found in systematic reviews to be the most health-promoting and sustainable..."[40]

2. Eating more plant-based foods and less meat is better for our health

On average, Americans consume approximately 4.4

vii Scope 3 emissions are defined by the Greenhouse Gas Protocol as indirect emissions, other than from the consumption of purchased electricity, heat or steam, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, outsourced activities, waste disposal, etc. Scope 3 emissions include emissions associated with the production of food consumed within the reporting organization or jurisdiction.

FIGURE 3: People are eating more protein than they need.



Source: Adapted from People Are Eating More Protein than They Need – Especially in Wealthy Regions. (2016). World Resources Institute. Retrieved from www.wri.org/resources/data-visualizations/protein-scorecard

to 5.5 ounces of meat and poultry each day, which is significantly more than is recommended in the *Dietary Guidelines for Americans* (DGAs).[41, 42] At the same time, fewer than 20 percent of Americans eat the recommended amounts of fruits and vegetables.[43] The 2010 DGAs recommended limiting red meat (pork, beef and lamb) consumption to 1.8 ounces per person per day.[44] The 2015 DGAs recommend a maximum of 26 ounces of meat, poultry or eggs a week for a typical 2000 calorie diet, which amounts to 3.7 ounces per day[45] — about the same as a small burger or chicken breast at one meal per day for adults, less for children and youth. The DGAs explicitly recommend that teenage boys and men reduce their overall intake of meat.[46] The DGAs specifically identify low-meat, Mediterranean-style and no-meat, vegetarian diets as viable options for a healthy nutritious diet.[47]

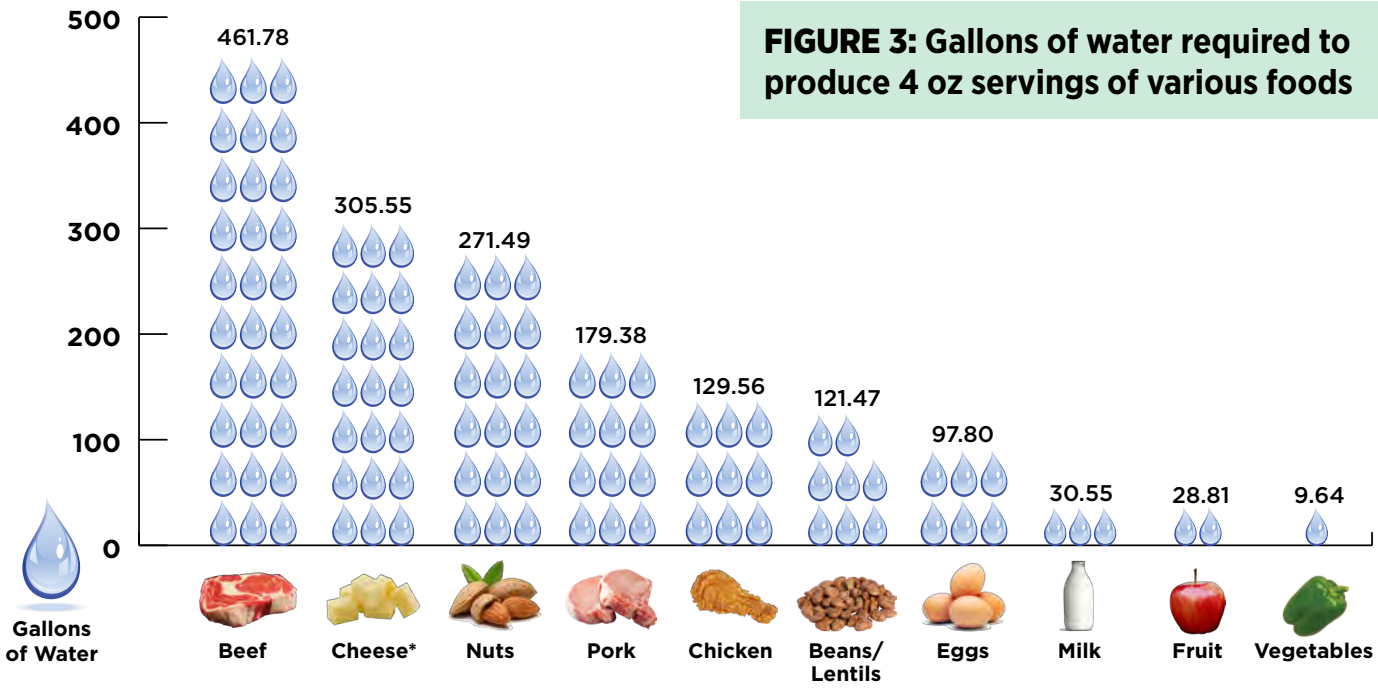
People's protein needs can easily be met by replacing some meat with the large variety of widely available plant-based proteins and by reducing protein consumption overall. On average, American adults consume approximately 66 percent more protein per day than necessary.[48] Considering the DGAs' recommendation of 5.5 ounces of total protein foods per day for a 2,000 calorie diet, at least one third of those protein foods should be coming from sources other than meat, poultry or eggs.[49]

Ample scientific evidence shows that high consumption of red and processed meats is associated with increased risks of heart disease, diabetes and some cancers, while plant-based diets can help decrease the risks of all three.[50, 51, 52] The American Cancer Society has long recommended "a diet that limits processed meat and red meat, and that is high in vegetables, fruits, and whole grains."[53, 54] In 2015, the World Health Organization's International Agency for Research on Cancer (IARC) classified processed meat as a *known* human carcinogen and red meat, including beef and lamb, as a *probable* human carcinogen.[55] In addition to saving lives, eating more plant-based foods can save the nation hundreds of billions of dollars in health care costs each year.[56]

3. Plant-based foods conserve water and protect water quality

Municipalities can conserve water and protect water quality by reducing meat consumption. Nearly one third of the total water footprint of agriculture in the world is related to the production of animal products.[57] Dietary shifts are crucial to conserve water resources, which are at risk in a warming world hit by increasingly frequent and catastrophic climate disasters such as prolonged droughts.[58] Producing plant-based proteins requires less water per unit of protein than animal products. For example, it takes 4-6 times as much water to produce a gram of beef protein than to produce a gram of lentil protein (see Figure 4, page 14.[59, 60] Overall, meat contributes 37 percent of the food-related water footprint of the average American citizen.[61] Given the vast amount of water used in meat and dairy production, food service operators can cut their water footprint by adopting a plant-forward menu.[62] Replacing some meat and dairy with plant-forward options can also reduce nitrate and phosphate runoff, eutrophication/dead zones and groundwater contamination associated with meat and dairy production.[63, 64, 65]

FIGURE 3: Gallons of water required to produce 4 oz servings of various foods



Note: These numbers include both the blue (surface and ground) and green (rain) water used to grow 4 ounces of food.

Source: Adapted from Mekonnen, M. M., & Hoekstra, A. Y. (2010). The green, blue and grey water footprint of farm animals and animal products. *Value of Water Research Report Series*, 1(48), 33. Retrieved from http://waterfootprint.org/media/downloads/Report-48-WaterFootprint-AnimalProducts-Vol1_1.pdf

Buying less conventional meat and dairy can make it easier to afford sustainably-produced, third-party certified food

Municipalities can use money they save purchasing less meat and dairy to buy organic, grass-fed and other third-party certified products that can deliver broader health, fair trade, animal welfare and environmental sustainability benefits. While this guide is focused on plant-forward purchasing as the core measurable strategy for mitigating climate change, see Appendix B for suggested language for integrating sustainable food considerations into a climate-friendly food purchasing policy. Wading through certifications can be confusing. See Appendix C for an overview of the benefits of the top credible, most widely available or rapidly growing third-party certifications for animal products that have been endorsed by leading non-profit organizations working to promote sustainable food procurement.

Local and organic food can have climate benefits

Shifting purchases of industrial meat and dairy products towards more plant-based foods should be the primary focus of quantifiable and trackable climate-friendly institutional food procurement. However, local, regional and organic food production can also have climate benefits because they support a more climate-resilient food system and, in some cases, reduce carbon emissions. Whenever possible, municipalities should prioritize purchases of local, regional and organic food. See Appendix B for model policy language to support local and organic food procurement.

A. Organic farming has climate resiliency and carbon sequestration benefits

Numerous studies show that, on average, organic diversified farming systems—including some that raise animals on pasture—generate lower GHG emissions than conventional chemical-intensive farming systems, largely because they use fewer energy-intensive fertilizer and pesticide inputs and have higher carbon sequestration rates.[viii, 66, 67, 68, 69] One United Kingdom government study found that farms using regenerative practices (e.g., cover cropping, crop rotation, mulching, etc.) emit between one half and two thirds less carbon dioxide per acre of production than large industrial farms.[70] A 2017 study that compared over 600 organic and conventional soil samples in the U.S. found that, on average, soils from organic farms had 13 percent higher soil organic matter and 26 percent greater potential for long-term carbon storage.[71] Meanwhile, by boosting soil organic matter and improving topsoil health, organic practices such as cover cropping and mulching improve water capture, infiltration and storage thus creating greater resiliency and yield reliability than industrial farming in the face of extreme climate change events like prolonged drought conditions.[72, 73] Not all organic farms will deliver these benefits, but support for diversified farms that implement regenerative practices will generally provide these important carbon sequestration and resiliency benefits.

2. Local and regional food improves climate resiliency, protects farmland and bolsters area economies

Buying food from local farmers and ranchers supports a municipality's local economy, increases healthy food access and builds resiliency and food security in the face of climate change.[74, 75] While reducing purchases of meat and dairy will result in a much more substantial reduction of GHG emissions than focusing solely on local food production, both are important and not mutually exclusive.[76] For instance, local foods can curb climate impacts by protecting farmland from carbon-intensive sprawl and shortening the distance that food is transported.[77] Especially in the case of produce, sourcing locally can reduce the overall carbon footprint significantly (by as much as 20 percent for broccoli and 25 percent for tomatoes). The transportation-related GHG reductions from sourcing meat locally are more limited, accounting for a reduction of only 1 to 3 percent."[78] The benefits are greatest when local food replaces air-freighted produce, fish and other refrigerated foods.

> **"For most foods, transportation emissions make up only a small fraction of the carbon footprint of food. For the average US diet, only 4% of farm-to-retail GHG emissions are associated with transport of food from the final producer through wholesale and retail channels. By contrast, 83% of emissions are associated with growing and manufacturing food."**
>
> **— West Coast Climate and Waste Management Forum, Climate-Friendly Purchasing Toolkit[78]**

viii When considering carbon sequestration in soils, several studies have found that some U.S. pasture-based and cattle grazing systems produce a smaller carbon footprint than industrial confinement systems. For more information on the environmental and health benefits of well-managed grass-fed livestock, see: Less and Better Meat is Key to a Healthier Planet.

PART II:
A step-by-step guide to climate-friendly food procurement

Part II of the guide lays out strategies for implementing climate-friendly and healthy food procurement practices including step-by-step guidance, examples of food purchasing initiatives undertaken by municipalities across the country and other helpful resources.

Step-by-step guide to climate-friendly food procurement

Phase I: Pass a climate-friendly food procurement policy and/or standards

Step 1: Establish a working group

Step 2: Enact a climate-friendly food procurement policy

Step3: Develop climate-friendly food standards

Phase II: Implement the policy and/or standards

Step 4: Develop a plan for communications and staff training

Step 5: Update bid solicitation and contract language

Step 6: Track and report progress

Phase I: Pass a climate-friendly food procurement policy and/or standards

Most municipalities have been slow to adopt nutrition or sustainability guidelines for their food service operations and concessions. A 2016 U.S. Centers for Disease Control and Prevention (CDC) study found that fewer than 5 percent of municipalities have established healthy food service guidelines or food and nutrition standards that govern the sale or provision of foods and beverages in food venues such as cafeterias and leased buildings.[79] Even fewer municipalities have adopted broader sustainable food procurement policies. There is a compelling opportunity for municipalities to fill this gap by adopting purchasing policies that will realize the complementary benefits of climate-friendly and health-promoting food presented in Part I of this guide.

Step 1: Establish a working group

Forming an internal food procurement working group is a critical first step to developing policies, plans and procedures that shift a jurisdiction's procurement practices. Relationships are key to this effort, whether across agencies or jurisdictions, or among food service providers, municipal staff and constituents.

A) Build a team across agencies and engage experts

Start by identifying the key decision-makers, including elected officials, advocates and community stakeholders, agency staff from the departments of health, sustainability/environment and procurement, as well as members of the local food policy council, if one exists.[80] If possible, a nutritionist with expertise in environmental nutrition should be on the team. It can also help to create an independent advisory group that can provide expert guidance to the working group and build consensus and political support. For example, **San Diego County, CA** created an Expert External Advisory Council of nutritionists, environmental experts, procurement specialists and public health professionals to help craft its Eat Well Practices (see page 31-32) that provide food guidance to the county's dining services and agency meetings and events.[81]

While it may be more effective to involve several departments in order to take a comprehensive approach, individual departments may decide to move forward with a climate-friendly food purchasing policy or initiative on their own.

B) Research current policies and areas of municipal authority over food

Researching your local government's current food procurement policies and where food is served by municipalities or on government property will guide next steps. Here are some questions to consider:

- ✓ Does the city or county have in place any healthy, local or sustainable food procurement policies or standards? What about nearby cities or counties?
- ✓ Does the municipality have a climate action plan, green purchasing, food or wellness policies? Is food procurement mentioned?
- ✓ If so, how broadly is the existing policy applied within your jurisdiction? Which local government offices, agencies, concessions or other food venues are covered? Are health and sustainability standards in place for food served during meetings and events on municipal property?
- ✓ Which buildings and other public sites have food service operations that are under the city's or county's control (see Table 1)? Which of these is most ripe for making menu modifications?

Cities and counties vary in the scope of their ability to influence food purchases. City governments often do not purchase as much food as counties but can lead by example and influence their diners' food purchases by modifying the menu offerings of concessions, cafeterias, caterers and other food companies doing business on city property. Cities also can collaborate with local school systems, universities, community colleges, surrounding counties, local restaurants and other businesses to promote dietary changes and climate-friendly food procurement.

TIP: Use lessons learned from other jurisdictions

Consider reaching out to jurisdictions that have already adopted a food procurement policy and/or standards. They may be able to share research and provide lessons learned from their experiences.

Table 1: Areas of municipal authority over food

Municipality-controlled spending:

- Public hospitals, senior centers, nursing homes and health clinics
- Jails, juvenile homes and other correctional facilities
- Caterers that service municipal events
- Staff meetings

Municipality-controlled food venues:

- Cafeterias, concessions, restaurants and vending machines in municipal office buildings
- Airports and convention centers
- Parks, sports stadiums and recreational facilities
- Museums, zoos and aquariums
- Sponsored events
- Food trucks

Spheres of municipal influence:

- Pre-K-12 public schools
- Community colleges
- Restaurants and food businesses (e.g., members of a green or sustainable business program)

C) Solicit input from employees and customers

Depending on the scope and nature of the procurement policy or initiative that a municipality pursues, municipal employees and members of the public who dine at municipal establishments can be important stakeholders in this process. Ensuring employee and public buy-in and involvement from the beginning can help support efforts to pass a strong procurement policy and successfully implement it. Consider inviting employees and other stakeholders who would be impacted by the procurement policy to the working group and develop a plan to gather input, perhaps by hosting listening sessions, sending out employee surveys or holding hearings where members of the public have the opportunity to weigh in on procurement policies and/or purchasing standards.

Step 2: Enact a climate-friendly food procurement policy

Once there is a strong working group in place, the next step is to enact a policy that establishes

a community's broad commitment to purchasing climate-friendly and healthy food. This policy should, whenever possible, mandate the creation of specific climate-friendly and healthy food standards (see Step 3 on page 29) as well as enforceable, trackable targets for emissions reductions from food. Food procurement policies should provide guidance as to which municipal entities are covered — such as public hospitals or senior programs, food venues on properties owned or leased by the municipality or caterers that serve government events and staff meetings. It may be prudent to begin with a pilot project or a policy that initially applies only to a few entities that are more willing or able to comply, such as concession stands. A successful pilot project or a phase-in can set the stage for the adoption of a municipality-wide policy. Food purchasing policies — and corresponding standards — provide the basis for food specifications that can be incorporated into bid solicitation documents (see Step 5 on page 34) for upcoming food commodity contracts and food service agreements.

Depending on the jurisdiction, food procurement policies can be implemented through a number of avenues, including through a standalone climate-friendly food procurement policy or as part of a green procurement policy, a climate action plan or a food or wellness policy. Similarly, food procurement policies can be enacted through a range of policy mechanisms including an ordinance, an executive order, a non-binding resolution, an agency regulation or informal agency guidance. Food procurement policies may include specific purchasing standards, as is the case with the Good Food Purchasing Policy described below, but oftentimes standards are created separately. The remainder of this section will lay out a menu of vehicles and mechanisms, stocked with examples from across the country, for enacting a climate-friendly and healthy food procurement policy.

A. Vehicles for enactment

1) Standalone food procurement policies

Most of the existing municipal food procurement policies are focused on health. At least 15 of the largest 40 cities surveyed by CityHealth, an initiative tracking municipal public health efforts, have created standalone healthy food procurement policies.[82] Thirteen mandate nutrition standards, eight of which apply the standards to all city contracts. Most do not encompass all food service activities of the municipality and instead focus on promoting healthy foods and beverages in vending machines, which is a more limited aspect of food service. These policies and nutrition standards provide a template for incorporating considerations like climate protection into food procurement policies.

Model climate-friendly food purchasing policy

See Appendix A for a model climate-friendly food purchasing policy. The policy includes ordinance or executive order language, corresponding definitions, food standards and contract language pertaining to tracking and reporting. The model policy includes a justification for climate-friendly food purchasing and describes the process for implementation. It specifies which municipal entities are subject to the policy, designates an overseeing agency, establishes timeframes for the creation of food standards and requires systems for implementation as well as for tracking and reporting on progress.

The Good Food Purchasing Program, discussed below, is one of the most comprehensive standalone food procurement policies, addressing environmental sustainability, animal welfare, health, worker justice and local economies. Other jurisdictions have adopted standalone procurement policies aimed to increase purchases of sustainable, local and/or organic food. See page 22 for additional examples of food procurement policies enacted as part of cities' or counties' climate action plans.

a. *The Good Food Purchasing Program*

Adopted by the cities of **Los Angeles, CA** and **Chicago, IL** as well as the public school systems in **Los Angeles, CA, Oakland, CA, San Francisco, CA** and **Chicago, IL**, the Good Food Purchasing Program (GFPP) is one of the most comprehensive sustainable food procurement policy models available.[83] The Program includes both a policy framework as well as specific Good Food Purchasing Standards that promote local, healthy, sustainable, fair and humanely produced foods and point to third-party certifications to define these values. After consultation with dozens of stakeholders, these standards were updated in 2017.

The new standards include three levels of attainment (similar to the U.S. Green Building Council's LEED standards) for five "value categories:" Local Economies, Environmental Sustainability, Valued Workforce, Animal Welfare and Nutrition.

The GFPP's animal welfare and environmental sustainability standards encourage the reduction in purchases of animal products. For example, reducing the carbon and water footprint of animal products by 20 percent over five years is one option for meeting the minimum environmental standard. To meet the highest standard, 25 percent of annual spending on food should come from a defined list of "environmentally sustainable sources" within five years, or as an alternative, the average carbon and water footprint of meat, poultry and cheese purchases per meal served must be reduced by 30 percent.[84] See Appendix G for the full standards related to environmental sustainability.

The GFPP was initially developed and adopted in **Los Angeles, CA**. In 2012, Los Angeles Mayor Antonio Villaraigosa issued an executive directive directing city agencies with annual food purchases above $10,000 to adopt GFPP and implement the City's Good Food Purchasing Guidelines.[85] The Los Angeles Unified School District adopted the policy that same year.

"By leveraging its purchasing power, the City has the opportunity not only to enact our Good Food for All Agenda, which promotes Good Food (food that is healthy, affordable, fair and sustainable), but we also have the ability to incentivize and encourage our regional food system as a whole to make Good Food more widely available to all Angelenos. Directing our food purchases can encourage greater production of sustainably produced food, healthy eating habits, respect for worker's rights, and support for the local business economy by providing new opportunities for small and mid-sized farmers and job creation along the food supply chain."

—Los Angeles executive directive establishing the Good Food Purchasing Policy[86]

The Los Angeles Food Policy Council developed the GFPP and ensured buy-in for its adoption in several ways. It sought departmental support for the policy by briefing executive staff in City departments about the policy to respond to any concerns. It also engaged departmental staff who would be directly involved in the implementation of the program to better understand what they were

Good Food Purchasing Program's Good Food Values

Improving equity, affordability, accessibility, and consumption of high quality, culturally relevant Good Food in all communities is central to advancing Good Food purchasing practices.

Local Economies: Support diverse, family and cooperatively owned, small and mid-sized agricultural and food processing operations within the local area or region.

Environmental Sustainability: Source from producers that employ sustainable production systems to reduce or eliminate synthetic pesticides and fertilizers; avoid the use of hormones, routine antibiotics and genetic engineering; conserve and regenerate soil and water; protect and enhance wildlife habitats and biodiversity; and reduce on-farm energy and water consumption, food waste and greenhouse gas emissions. Reduce menu items that have high carbon and water footprints, using strategies such as plant-forward menus that feature smaller portions of animal proteins in a supporting role.

Valued Workforce: Source from producers and vendors that provide safe and healthy working conditions and fair compensation for all food chain workers and producers from production to consumption.

Animal Welfare: Source from producers that provide healthy and humane conditions for farm animals.

Nutrition: Promote health and well-being by offering generous portions of vegetables, fruit, whole grains, and minimally processed foods, while reducing salt, added sugars, saturated fats, and red meat consumption and eliminating artificial additives.

already doing around food procurement and discuss how their department would be affected and could benefit through participation. The Council also held numerous stakeholder focus groups to ensure that there would be no industry pushback (for example, from distributors) to the City adopting the policy. This due diligence cleared the way for the executive directive and city council motion that were both adopted in October 2012.

"The Good Food Purchasing Policy sets a gold standard framework for what 'Good Food' is and provides guidelines for large food purchasers such as hospitals, universities and government programs to work with food industry partners to source food that is healthy, affordable, fair and sustainable…[It has] been instrumental in driving 'Good Food' goals in Los Angeles County."

— Michelle Wood, Program Manager, Food Procurement & Policy, Department of Public Health, Los Angeles County, CA

Building on the success in Los Angeles, the Center for Good Food Purchasing was established in 2015 as a national non-profit organization that provides fee-based technical assistance and implementation support to public institutions across the country — including cities, counties and school districts — that are interested in adopting the GFPP. At the time of publication, there are active initiatives to adopt the GFPP in a dozen cities across the country, with about 25 institutions being supported by the Center for Good Food Purchasing.[87] Examples include: **Austin, TX** (Austin Independent School District, Universty of Texas at Austin, Austin Convention Center); **Minneapolis/St. Paul, MN** (Minneapolis Public Schools); **San Francisco, CA** (Zuckerberg San Francisco General Hospital, Laguna Honda Hospital); and **Washington, DC** (DC Public Schools).

b. *Sample sustainable food procurement policies*

These cities and counties have enacted food procurement policies that address various aspects of sustainability and could be amended to include climate-friendly food.

San Francisco, CA
In 2009, then-Mayor Gavin Newsom issued an executive directive declaring the cities and counties "commitment to increasing the amount of healthy and sustainable food" and "ensuring city funds are spent in a manner consistent with [San Francisco's] social, environmental and economic values."[88] The directive included a set of principles related to healthy and sustainable food that should guide city purchasing practices, established a Food Policy Council to monitor and advance the directive and established specific requirements and deadlines for City departments to implement the policy. See Appendix G for the full text of the executive directive.

Woodbury County, IA
In 2005, Woodbury County passed a resolution enacting the Woodbury County Policy for Rural Economic Revitalization.[89] This policy states that the County "shall purchase, by or through its food service contractor, locally produced organic food when a department of Woodbury County serves food in the usual course of business," which includes its jail, work release center and juvenile detention facilities. The policy specifies guidelines for negotiating prices with the contractor and procedures for monitoring and reporting on the effects of the program.

Cleveland, OH
In 2010, the Cleveland Mayor and City Council enacted a local ordinance requiring that 10 percent of food must be obtained from within 150 miles.[90] The ordinance also provides a 2 percent bid discount on buying from local providers and/or providers that purchase 20 percent of their food locally.

Austin, TX
In 2013, the Austin City Council adopted a resolution directing the City Manager to develop a local and healthy food purchasing policy for City spending and a healthy vending machine policy for City facilities.[91]

Sweden produces a visionary policy: Eat S.M.A.R.T

The City of Malmö, Sweden has a visionary sustainable food procurement policy.[92] The City has been a leader on food issues for years, including by advancing fair trade and other sustainability goals. The city's policy "aims to deliver good food of high quality in all public canteens and has targets for all food served in the city to be certified organic by 2020, with greenhouse gas emissions (GHG) related to food cut by 40 percent by 2020, compared to 2002 levels."[93] At the end of 2012, 40 percent of the food budget (about nine million Euros) was spent on organic food.[94] Malmö has taken impressive steps including the adoption of Eat S.M.A.R.T. standards stating, "To ensure that the procurement of food is better for our health, the economy, and the environment, the S.M.A.R.T. model should be followed as much as possible."[95]

Eat S.M.A.R.T. standards are a model developed by the Institute for Public Health in the Stockholm Region with input from the National Board for Consumer Policies and the National Food Administration. Eat S.M.A.R.T. is based off of Sweden's nutrition recommendations and its environmental goals. S.M.A.R.T. stands for:

- **S**maller amount of meat
- **M**inimise intake of junk food/empty calories
- **A**n increase in organic
- **R**ight sort of meat and vegetables
- **T**ransport efficient

For additional guidance on developing a sustainable procurement policy, see *The Buck Starts Here: A Sustainable Procurement Playbook for Cities*, which the Responsible Purchasing Network developed for the Urban Sustainability Directors Network. Johns Hopkins Center for a Livable Future and the Center for Health Law & Policy Innovation at Harvard Law School partnered to create the Good Laws Good Food Toolkit, which includes a new section on institutional food procurement policies. Finally, the Real Food Challenge, a campaign that seeks to shift food procurement policies at universities towards locally and community based, ecologically sound, humane and fair, has developed a guide outlining its targets in each of those categories that may prove useful.

2) Environmentally preferable or green procurement policy

Some municipalities with green purchasing policies have incorporated sustainable food purchasing policy language into these broader sustainable procurement policies. In such cases, the language is typically more limited than in a procurement policy dedicated solely to sustainable food.

San Jose, CA: The City of San Jose's Environmentally Preferable Purchasing Policy (EP3) directs City agencies to "Ensure that at least 30% of direct purchases of food served in City facilities is locally grown and organic."[96]

> **"By incorporating environmental considerations into public purchasing, the City intends to reduce impacts to human health and the environment, reduce its carbon footprint... and improve the environmental quality of the region."**
>
> **– City of San Jose, CA's EP3**

Washington, DC: As part of its Sustainable Purchasing Program, the District of Columbia created the Environmental Specification Guidance for Food Services, which states that "20% of food purchases, by cost, shall be locally sourced, reducing emissions and GHGs from food transportation." This guidance also directs municipal food service providers to ensure that "80% of the District's seafood purchases meet sustainable sourcing requirements."[97]

3) Integrating food procurement into climate action plans

Many cities and counties have developed climate action plans (CAPs) that lay out concrete steps and mitigation strategies to reduce a municipality's climate impacts. Some of the most innovative CAPs are beginning to address the climate impacts resulting from the consumption of goods and

services in their jurisdiction, including food. Consumption, including food purchased directly by municipalities or sold on municipal property, represents a significant portion of a municipality's embedded greenhouse gas emissions and is a critical piece of any comprehensive CAP.

Of dozens of municipal CAPs surveyed by the authors of this guide, eight promote actions related to municipal food procurement, and at least 17 highlight the role of dietary shifts — particularly meat and dairy reduction — in combatting climate change. Many of these CAPs encourage strategies to educate and activate the community and its businesses around climate-friendly eating, such as Meatless Mondays (see page 28). A few go further by recommending action to reduce embedded emissions associated with food purchases of large institutions in their jurisdiction — particularly those that operate on public property.

"Because most emissions are emitted during production, our best opportunity to reduce our carbon footprint through food choices is by eating more fruits and vegetables and less meat and dairy."

— Seattle, WA's Climate Action Plan[98]

a. *Climate action plans that include climate-friendly procurement strategies*

Several municipalities have made commitments to climate-friendly food procurement in their climate action plans.

Multnomah County, OR and the City of **Portland, OR** adopted a joint Climate Action Plan in 2015 that commits to increasing institutional purchases of healthy, low-carbon and minimally processed food at public meetings, at events and in government facilities as well as "leveraging the purchasing power of private institutions to source low-carbon and local foods."[99] It commits to developing climate action metrics in the areas of consumption, including food and agriculture from its consumption-based greenhouse gas emissions inventory. Portland has since developed specific climate-friendly meeting guidelines (see Appendix G4).

Santa Monica, CA's Climate Action Plan commits the municipality to reducing meat and dairy purchases by 15 percent and encourages large institutions to participate.[100]

Eugene, OR's Community Climate Energy and Action Plan calls for implementing a "Buy climate-friendly first" food purchasing policy for public institutions, including city and county governments, schools and hospitals.[101]

Carrboro, NC's Community Climate Action Plan includes a target of reducing community-wide emissions from animal consumption by 50 percent by 2025 and proposes increasing plant-based options at town functions, local restaurants and schools.[102]

Climate action plans that recognize the essential role of reducing meat and dairy consumption

- Albany, CA
- Ann Arbor, MI
- Austin, TX
- Berkeley, CA
- Carrboro, NC
- Cincinnati, OH
- Cupertino, CA
- Davis, CA
- Eugene, OR
- King County, WA
- Multnomah County, OR
- Oakland, CA
- Pittsburgh, PA
- Portland, OR
- Santa Monica, CA
- Seattle, WA
- Shoreline, WA

> **"From a carbon perspective, not all food is created equal, and what we choose to eat is far more impactful than how far that food has traveled. That's why Portland's climate plan includes actions to encourage plant-based diets and create purchasing guidelines for low-carbon and minimally processed foods for public meetings and events."**
>
> **— Steve Cohen, Manager, Food Policy and Programs, Bureau of Planning and Sustainability, Portland, OR**

b. *Climate action plans that address local or healthy food procurement*

These local and healthy food procurement policies could be expanded to address the larger climate impacts associated with food purchases:

Toronto, ON's Climate Action Plan calls for a local food procurement policy that was subsequently enacted by the Toronto City Council.[103] The procurement policy, established "in order to reduce greenhouse gas and smog causing emissions generated by the import of food from outside of Ontario... progressively increases the percentage of food being served at City-owned facilities or purchased for City operations from local sources."[104] While local food purchasing is just one small tool in combatting climate change, this plan lays the framework for reducing the larger climate impact associated with food purchasing.

King County, WA's Strategic Climate Action Plan (SCAP) recognizes that,

> Farming can result in GHG emissions associated with managing soils, using manufactured fertilizers, managing manure, operating farm equipment, transporting products, and animal digestive processes. Sustainable farming practices can minimize these emissions. Additionally, some crops, including many fruits and vegetables, result in fewer GHG emissions compared to other foods.[105]

The SCAP reinforces recommendations by the County's Food Policy Council to "increase the number of healthy food procurement policies in King County institutions (schools, child care and hospitals)" and in the County's emergency food system.[106]

Alameda County, CA's Climate Action Plan calls for "serving locally produced, healthy foods that are not heavily processed" at county meetings and events.[107]

New accounting and reporting frameworks are key to addressing embedded food emissions

One challenge to incorporating consumption in municipal CAPs is a lack of adequate accounting and reporting frameworks related to embedded emissions (see pages 12-13). Fortunately, a promising new initiative, led by the Urban Sustainability Directors Network's (USDN) Sustainable Consumption in Cities initiative and managed by **Portland, OR**'s Bureau of Planning and Sustainability, is seeking to develop harmonized standards and protocols for consumption-based GHG emissions accounting. This framework will help guide the creation of new tools and strategies for better integrating consumption impacts into CAPs.[108] While not explicitly mentioned in the initiative's goals, climate-friendly food procurement is one important, trackable emissions reduction strategy that municipalities can immediately take to reduce their consumption based emissions.

With this USDN project, more local government leaders will have the ability to specifically address food consumption-related GHG emissions. **Austin, TX** is one such leader beginning to address embedded food emissions. The Austin-Travis County Food Policy Board has created a food and climate working group, which will augment Austin's Community Climate Plan to show how the food system contributes to global GHG emissions. The working group will calculate Austin's carbon footprint from its food consumption using a consumption-based model.[109]

The City and County of **Denver, CO** estimated consumption-based emissions from food in their Climate Action Plan. They found that "upstream emissions" from food accounted for 14% of their total emissions, about on par with residential energy use and gasoline vehicles.[110]

4) Integrating climate-friendly procurement into food and wellness policies

In addition to green purchasing policies and climate action plans, food action plans and wellness policies can serve as entry points to promote climate-friendly and healthy food procurement.

a. *Food action plans*

Over the past decade, food policy councils and local governments have created food policies or system-wide plans for addressing food access, health and sustainability issues.[111] Many municipalities are integrating food-related measures that reduce GHG emissions and enhance the climate resiliency of their food systems, including support for local and organic urban food production, food waste reduction and composting programs. **Atlanta, GA**, for instance, has launched AGlanta, a new initiative to dramatically scale up local food production to increase resiliency and address climate issues. Some cities, such as **San Francisco, CA**, have adopted comprehensive composting strategies to reduce food waste emissions, while others are working to increase access to healthy food.[112] While these strategies are important for building resiliency and, in some cases, reducing emissions, local governments can generate even larger climate benefits by reducing upstream food-based GHG emissions associated with municipal purchasing. Several local government food initiatives can serve as models of how to integrate climate friendly food procurement into municipal food action plans:

> **"By supporting greater production of local, sustainable, nutritious and accessible food through our AGLanta program, we are building a healthier and more prosperous city, while also mitigating our negative impact on climate and the environment. We are also promoting healthier diets with a smaller carbon footprint, such as local-grown plant-based foods, to make our citizens and communities healthier and happier."**
>
> **— Jairo H. Garcia, Director, Climate Policies, Atlanta, GA**

> **"The City invests over three million dollars in food-related contracts each year. We can use those dollars to support food that is healthy, local, and sustainably produced, ensuring that our purchasing and contracting dollars support food production that preserves our health and our environment."**
>
> **— Seattle, WA's Food Action Plan**

King County, WA's Local Food Initiative 2016 Annual Report highlights food procurement policies as a key vehicle for influencing its food system and promotes the consumption of healthy, low-carbon foods through "nutrition standards, *procurement practices* [emphasis added], and behavioral economic strategies to increase the consumption of fruits and vegetables."[113]

Seattle, WA's Food Action Plan emphasizes food procurement as a strategy, calling on the City to use its purchasing and contracting power to support healthy, local and sustainably produced food.[114]

Multnomah County, OR's Food Action Plan encourages less meat consumption and supports third-party certified food by calling on residents to "Minimize your climate impacts by reducing the upstream food-based emissions by purchasing local food to reduce transportation miles and reducing meat consumption, which is more carbon intensive to produce than vegetables." It also urges purchases of "third-party certified food such as USDA organic, Food Alliance, Salmon Safe, and Certified Humane."

b. *Wellness policies*

Wellness policies represent another vehicle for promoting consumption of healthy, climate-friendly food within municipal facilities and on municipal property.

Brentwood, CA has a wellness policy to ensure that City staff and residents have healthy choices that meet specific nutritional standards for items sold at public facilities.[115]

San Mateo County, CA has adopted an expansive wellness policy to "Provide access to healthy food and beverages for employees and the public during the workday and to make the 'Healthy Choice' the County's preferred and default choice."[116] To accomplish this, the County sets nutrition standards; sponsors food and nutrition programs that increase access to healthier food at work (e.g., farmers markets, onsite produce delivery and Community Supported Agriculture); serves appropriate portion sizes; and contracts with food services operations that "purchase local and sustainable food products."

Kansas City, MO has adopted healthy vending standards that apply to the sale of food and beverages in its parks. Park vendors that sell healthy food receive discounts on the price of a park permit or are allowed to sell at multiple parks with a single permit.[117] While most of these wellness policies do not specifically highlight meat and dairy reduction, they do encourage more plant-based foods and smaller portion sizes of animal products, critical features in a healthy, climate-friendly diet.

c. *Comprehensive municipal plans*

Some cities have developed plans that aim to comprehensively address health, sustainability and economic prosperity, which offer another opportunity for highlighting procurement as a strategy to increase consumption of climate-friendly and healthy food.

Austin, TX's Imagine Austin Comprehensive Plan, adopted with significant community input in 2012, recommends new procurement policies and other actions to promote healthier, more sustainable food in its local institutions in order to protect public health. The plan calls for new programs, policies and coordination to "Reduce obesity and other diet-related diseases by establishing local fresh food initiatives in institutions such as schools, colleges, universities, hospitals, nursing homes, city and county departments and facilities, and by implementing and encouraging purchasing policies that support local and sustainable foods."[118]

"Eating less meat... can significantly impact greenhouse gas emissions. If 10% of Cincinnatians ate meat one less day per week, CO_2 emissions would be reduced by 75,000 tons per year."

—Cincinnati, OH's Green Cincinnati Plan[119]

B. Mechanisms for advancing climate-friendly and healthy food procurement policies

The mechanism by which a food procurement policy is enacted will vary depending on the municipality's approach and its political and legal landscape. Ideally, food procurement policies will be legally binding, but there are a variety of non-binding mechanisms that can achieve the same goals or act as an incremental step towards institutionalizing climate-friendly procurement policies. In some cases, no official policy is needed to integrate climate-friendly language into procurement bidding documents or food service contracts so long as procurement strategies have been generally identified in the context of a green purchasing policy, climate action plan or food or wellness plan.

Improving Food Procurement Policies in King County

Large institutions like cities, schools, hospitals and large employers can have significant impact onthe food system with how they purchase food. The scale of their procurements creats or stifles opporunities for the local food economy. Procurement decisions also determine what food is available within that institution. Shifting food procurement policies can gretly increase access to healthy food as well as support the local food economy.

Source: *King County Local Food Initiative, 2016 Annual Report*

Cities can promote climate-friendly menus in the private sector through green business programs

Beyond influencing food offerings on municipal property, local governments can also help reduce consumption-related GHG emissions by encouraging more climate-friendly food items to be offered by local restaurants, catering companies and private hospitals, schools and colleges in the community. A local green business program, for example, can encourage the adoption of municipal food standards or the purchase of climate-friendly food as one of its certification criteria. It can also give visibility to restaurants that offer more plant-based entrées and third-party certified meat choices or that are certified by programs like Zero Foodprint or Eat REAL.[x]

1) Local ordinances and executive orders

If a municipality is enacting a new standalone food procurement policy, it likely will need to pass the policy via a local ordinance or an executive order. Oftentimes, an executive order and a local ordinance represent alternative paths to the same goal. Generally, ordinances have the advantage of more permanently codifying a policy, but they can be difficult to pass and harder to update with necessary changes. Executive orders or directives can often be accomplished more easily and quickly but run the risk of being reversed when a new administration takes office. These strategies can be used in tandem whereby a mayor or county executive will issue a directive requiring the council to pass legislation, giving the council authority to define the scope and nature of the policy. This way there is buy-in from both the legislative and executive branch. Similarly, an executive order or local ordinance can set out the broader policy objectives and designate authority to an appropriate municipal department or agency, such as a health department or food policy task force, to determine the specifics of the policy and the process for implementation.

2) Integrating procurement in existing policy

As discussed above, a climate-friendly food procurement policy can also be incorporated into a broader green purchasing policy, a climate action plan or a food and wellness policy. In these instances, a municipality may need to amend the existing policy via regulations or a guidance document created by the agency or office administering the program. Alternatively, the existing policy may need to be amended through an ordinance or executive order. A municipality's legal department may be a good resource for determining the options for including sustainable food procurement in a pre-existing related policy.

3) Non-binding resolutions

Mayors and municipal leaders can also utilize non-binding resolutions, proclamations, pledges and pacts to establish their government's commitment to purchasing healthy, climate-friendly food. These approaches can be a key first step on the path to more impactful action. Issuing a proclamation or signing a pact shows leadership and can inspire important changes in municipal purchasing and access to plant-based foods. It also raises awareness among residents and brings media attention to the underreported role of food's — particularly animal products' — impact on health and climate change.[120]

For example, the Milan Urban Food Policy Pact, signed by cities across the globe, encourages meat reduction for health reasons and calls for using public procurement to link cities to healthy food and support sustainable food production. Numerous U.S. cities — **Austin, TX**, **Baltimore, MD**, **Chicago, IL**, **Miami, FL**, **New York, NY**, **Pittsburgh, PA**, **San Francisco, CA** and **West Sacramento, CA** — are among the 148 signatories worldwide.

x The Eat REAL standards are a point-based system, similar to the LEED green building certification, that address health and sustainability for food service businesses. Zero Foodprint assesses carbon impacts of restaurants and certifies restaurants that mitigate their emissions and offset their foodprints with investments in food-based carbon projects.

Municipalities embrace Meatless Mondays through proclamations, resolutions and pledges

In recognition of the health and environmental benefits of reducing meat consumption, more than a dozen municipalities have passed resolutions in support of "Meatless Mondays," and hundreds of K-12 school districts, nospitals, food banks, workplaces and restaurants have committed to going meatless or offering more plant-based options one day a week since the program launched in 2003.[121] For example, in 2013, the City of **Philadelphia, PA** passed a resolution that declared all Mondays as Meatless Mondays and urged residents to participate in recognition of "the benefits of a diet high in fruits and vegetables."[122] This proclamation set the stage for health and sustainability leaders inside and outside of local government to urge the city to follow its own advice when it comes to its food purchasing and consumption. The following year, Philadelphia Public Schools implemented Meatless Mondays, impacting more than 85,000 meals served to students each week.[123] Meatless Mondays have been implemented in school systems across the country, from **Los Angeles, CA** to **Baltimore, MD** to **Sarasota, FL**.[124] In October 2017, **New York City, NY** the largest public school system in the country, announced the launch of a Meatless Monday pilot in 15 Brooklyn schools.[125]

These cities have promoted Meatless Mondays through public education and outreach, including by highlighting restaurants and events promoting plant-based food, hosting pledge drives where citizens can commit to going meatless on Monday, generating media coverage about the health and climate benefits of reducing meat consumption and supporting policies that encourage Meatless Mondays:

- Berkeley, CA
- Boca Raton, FL
- Long Beach, CA
- Los Angeles, CA
- Minneapolis, MN
- Oakland, CA
- Philadelphia, PA
- Pittsburgh, PA
- Sacramento, CA
- Santa Cruz, CA
- San Francisco, CA
- San Jose, CA
- South Miami, FL
- Takoma Park, MD
- Tempe, AZ
- Washington, DC
- Wilmington, DE

The Meatless Monday campaign demonstrates the power of institutions to shift diets and highlights the potential for municipalities to make an even greater difference by systematically replacing meat with plant-based alternatives at public institutions and on municipal property. Meatless Mondays, as a platform to educate the public about the importance of eating plant-based foods, can generate support for broader institutional commitments to serve more plant-based foods, reduce meat portions and serve blended options on a regular basis.

STEP 3: Develop climate-friendly food standards

Unlike food procurement policies — which typically establish a broad framework for purchasing healthy and environmentally preferable food — food procurement *standards or guidelines* provide more detail about how to interpret and implement the policy. Food standards typically establish specific guidance about what can and cannot be served in a range of food environments within the municipality's purview. See Table 1 (page 18) for a list of these potential areas of municipal control over food service.

In practice, developing standards may happen in concert with developing a food procurement policy, but this guide will treat the creation of standards separately, outlining multiple paths for establishing these food standards. They can come hand-in-hand with a food procurement policy (as is the case with the Good Food Purchasing Program on page 19), flow out of a food procurement policy or be created at the direction of a health or environmental department leader, even without a formal policy. Standards can also be promoted through broader policies that encompass green procurement more generally (e.g., LED lighting or energy-efficient cars), or included with broader healthy food policies, such as healthy food zones, urban gardens or other local food initiatives. Even without a specific policy, it is possible to integrate climate-friendly food standards into bid solicitation documents for food service and concession contracts or to guide purchases of food served at public meetings and events.

Model climate-friendly food standards

Since there are few existing comprehensive climate-friendly food standards, we have created model standards (see Appendix A) designed to encourage consumption of more plant-based foods and less meat wherever food is served in local public institutions (e.g., hospitals, senior care facilities, etc.) and on government property (e.g., meetings, festivals, concession stands, etc.). The model offers slightly revised standards for approved caterers or concessions on government property since these entities may have more flexibility than large public institutions to carry more climate-friendly food products.

Federal government purchasing guidelines provide a model for municipalities

The U.S. Centers for Disease Control and Prevention (CDC) recommends that government agencies improve public health and reduce environmental impacts by establishing healthy and sustainable guidelines for foods and beverages offered for sale in government buildings and on public property.[126] In 2012, the CDC helped craft the first *Health and Sustainability Guidelines for Federal Concessions and Vending Operations*.[127] In addition to promoting local agriculture, animal welfare and organic farming, these guidelines reinforced health advice from the *2010 Dietary Guidelines for Americans (DGAs)*.[128] The *Food Service Guidelines for Federal Facilities* were updated in 2017 to reflect the new 2015-2020 DGAs.[129] These new guidelines are designed to ensure that healthier foods and beverages are available and encouraged at federal facilities, that "environmentally responsible practices are conducted in federal food service venues," and that "communities are economically supported through local food sourcing."[130]

A. Healthy food and nutrition standards

Healthy food and nutrition standards are aimed at increasing the availability of healthful food in institutions that sell or serve food to employees, the general public or other populations served by municipalities. According to a survey conducted by the Institute of Medicine and Centers for Disease Control and Prevention, 13 percent of mid- and large-size cities have nutrition standards in place, many of which reflect some of the recommendations of the U.S. *Dietary Guidelines for Americans* (see page 13).[131] Most of these jurisdictions' nutrition standards are focused on food served to employees or the general public on municipal property and do not apply to food served to institutionalized populations, such as people in municipal-run correctional facilities or nursing homes. These healthy food standards provide a template for the creation of climate-friendly food standards—either as standalone standards—or included as a component of existing nutrition standards.

According to research conducted by the non-profit CityHealth, eight of the forty major cities or counties it surveyed have created healthy food standards.

- Boston, MA
- Long Beach, CA
- Los Angeles, CA
- New York, NY
- Philadelphia, PA
- San Francisco, CA
- Santa Clara County, CA
- Washington, DC

For these cities and others for which healthy food standards are already in place, they can be revised to include more plant-based proteins and less meat, simultaneously addressing a municipality's health and climate concerns. For example, updating the **New York City, NY** food standards could produce huge gains for health and the environment.

In 2008, the Mayor of New York issued an executive order requiring all city agencies to follow the New York City Food Standards.[132,133] These standards, which apply to all foods purchased, prepared and/or served by the agency and agency contractors, affect nearly 250 million meals and snacks served every year at day care centers, correctional facilities, senior centers and other City institutions and properties. While the standards focus primarily on nutritional concerns such as limiting sodium and fat and serving more fruits and vegetables, they also include a commitment to environmental sustainability, creating an opening and rationale for incorporating climate considerations in alignment with these goals.

> **"New York City also recognizes the importance of promoting an economically and environmentally sustainable food system that supports local and regional economies and conserves natural resources, in alignment with long term public health goals. Agencies are encouraged to consider, when practical and cost effective, procurement practices that prioritize local and regional food producers and manufacturers, and support reductions to the overall environmental impact of the food system."**
>
> **—New York City, NY Food Standards[134]**

B. Climate-friendly food standards

Healthy food standards overlap with climate-friendly food standards in that reducing meat and dairy is conducive to both a healthy diet and a healthy planet. **Santa Clara County, CA** and **Philadelphia, PA**, as part of their healthy food standards, include specific recommendations on expanding plant-based and plant-forward food options, serving non-dairy milk and serving smaller portions. **San Diego County, CA** adopted comprehensive health and sustainable food guidance that includes climate-friendly food recommendations.

Santa Clara County, CA (San Jose) adopted nutrition standards that apply to meals served in their institutional food service operations. These standards require:

- A vegetarian option for all meals provided, and a vegan option whenever possible;
- Healthier foods to be placed prominently;
- Plant-based milk (e.g., soy, rice and almond) with less than 130 calories per 8-ounce serving
- Smaller portion sizes; and
- Healthier food options that incorporate more fruits, vegetables, whole grains, low-fat and

low-calorie foods (low-fat dairy, lean protein and lower-fat condiments).[135]

Philadelphia, PA adopted nutrition standards that require luncheon/deli meats to be served no more than two times per week and at least one vegetarian or bean-based entrée to be served for lunch and dinner per week.[136]

San Diego County, CA's Board of Supervisors adopted the Eat Well Practices in 2016.[137] The standards are aimed at:

- Building better health by offering more healthy options, including fruits, vegetables, and whole grains among the County's congregate and custodial populations, employees, and the public;
- Supporting a thriving economy by capitalizing on the wealth of agricultural resources in San Diego County, as well as California, and increasing opportunities for local farms, ranches, and fishermen; and
- Fostering a resilient environment by promoting sustainable foods and practices.

The Eat Well Practices support meat reduction and other sustainability goals with the following standards:

- Prioritize organic and sustainable products
- Prioritize plant-based foods, including protein and dairy alternatives; offer plant-based foods and dishes and vegetarian meals.
- Consider offering protein foods from plants such as legumes (beans and peas), and nuts, seeds, and soy products.
- Consider offering a vegetarian entrée option when more than one entrée option is provided.
- Consider offering alternatives to red meat and avoid processed meats (e.g., hot dogs, bacon, sausage, deli meats); if offered, serve infrequently and in small portions.
- Consider purchasing meats and poultry raised without the routine use of antibiotics and/or growth hormones.

These aspirational food standards, backed by a strong implementation plan (see Phase II below), can positively impact the seven million meals served by San Diego (the nation's seventh largest county) each year. See Appendix G3 for more of the Eat Well Practices that relate to sustainability.

C. Food guidelines for caterers, government meetings and events

Several municipalities have adopted policies, developed guidelines and resources and negotiated contracts to improve the health and sustainability of food and beverages that are offered at city meetings and catered events. For example:

- **Portland, OR** has created Healthy People, Healthy Planet food purchasing guidelines that encourage city employees "to make healthy and sustainable choices for City-sponsored meetings, trainings, and events when using public dollars," with an aim to "reduce the negative environmental and climate impacts of catering by addressing food type and sustainability principles."[138] The guidelines specifically urge purchasers to emphasize vegetarian and vegan options and to minimize or eliminate meat and dairy offerings. See Appendix G4 for the full guidelines.
- **Philadelphia, PA**'s Good Food Caterer Guide highlights vegetarian and vegan as part of its sustainability criteria for caterers: "The business is proactively working in at least three of the five sustainability areas: animal welfare (including being vegan or vegetarian), organic ingredients, fair trade, local sourcing, and other green activities."[139]
- **Lakewood, CO** has created a Healthy and Sustainable Food Providers Request for Qualifications (RFQ) to identify caterers for city meetings and events.[140] The RFQ includes a requirement for caterers to provide vegetarian options and have half-portion menu items available. It also includes preferences for caterers that provide entirely plant-based or organic menu options.
- **Boulder County, CO** established a policy for Zero Waste and Healthy Menu Meetings and Events and provides tips for healthy meetings and events that include:
  - Select healthy proteins and at least one plant-based vegetarian option;
  - Serve small portions; and
  - Offer a variety of fresh vegetables.[141, 142]

Phase II: Implement the policy and/or standards

Once a municipality has created its climate-friendly food procurement policy and/or standards (or is ready to include standards into its bid solicitation documents contracts without a policy), it is time to do the nitty-gritty work of implementation. Implementation will vary by jurisdiction but generally will include developing a plan for communication, training and sharing tools; updating bid solicitation and contract language; and tracking and reporting progress.

Since a municipality's climate-friendly food procurement policy may impact a wide array of purchasing activities and involve several departments, creating an implementation plan is a useful way to engage staff and ensure that the program is rolled out smoothly. The plan should establish short-term goals and milestones, identify upcoming high-impact opportunities and set priorities.

Sample implementation plans

San Diego County, CA developed a comprehensive *Live Well San Diego* Food System Initiative Implementation Plan to support its Eat Well Practices (see Appendix G) including short-, mid- and long-term goals with specific deadlines for each goal. Key elements include:

- Expanding the internal county committee of food service providers to include broader representation;
- Developing metrics tied to the goals of improving health, supporting a thriving economy and fostering a resilient environment;
- Establishing a baseline of food service operations in congregate/custodial meal programs and cafeterias/cafes with the assistance of all county groups;
- Developing marketing/educational materials and implementing a communication plan;
- Developing a framework for integrating Eat Well Practices language into food-related Request for Proposals (RFPs) and contracts, including contracts for County custodial/congregate meals, group homes/home-delivered meals and cafeterias/cafés;
- Periodically surveying county food service operations; and
- Developing a tracking system to measure food practices.[143]

Santa Clara County, CA created an implementation plan soon after adopting nutritional standards for its food service operations. While focused specifically on nutrition, the general implementation plan could be applied to climate-friendly food standards. The plan includes:

- Communications to department directors announcing standards, implementation timelines and departmental roles;
- Trainings provided to facility managers on how to implement nutrition standards;
- A social marketing campaign designed to educate employees, participants and the public on nutrition standards;
- Procurement procedures updated to ensure that solicitations for food and beverage contracts/vendors comply with standards; and
- A requirement that one year after implementation, the Nutrition Standards Committee will reconvene and assist the evaluation process, identifying any changes or additions needed.[144]

STEP 4: Develop a plan for communications and staff training

The rationale, benefits and implications of a new policy or standards should be communicated to all relevant internal staff and, where appropriate, external stakeholders. Keep in mind that the staff charged with implementation may not have been given an opportunity to understand the rationale or have the time or training to ensure that products or food service contractors are in compliance with the policy and/or standards. Providing culinary trainings, menu design templates and other educational resources for food service staff and contractors can facilitate a successful implementation. Offer easy-to-use, accessible tools such as lists of approved vendors, links to certified product sources, sample recipes and resources for designing menus that feature plant-based and lower-meat entrées. Involve chefs and dieticians in the process and ensure that culinary staff receive the training necessary to understand and implement the changes.

A. Creative menus

Encouraging creative menu options, such as blended burgers[xi] or smaller meat portions coupled with more vegetables, can reduce total meat and dairy consumption while increasing consumption of plant-based alternatives. Offering smaller portion sizes on menus is an easy and cost-effective way to reduce meat purchases, help avoid wasted food and potentially save money. For example, Oakland Unified School District was able to offer local organic meat by reducing the total amount of meat it served.[145] Friends of the Earth has published a list of blended burger sources made with higher quality, third-party certified grass-fed and/or organic meats. The Blend features numerous lower-carbon blended meat recipes. A wide array of plant-forward and lower meat recipes can also be found at The Culinary Institute for America's website. Delicious plant-based recipes, menu templates and strategies can be found at Forward Food, and the Humane Society of the U.S. and Menus of Change provide inspiration for healthy, plant-forward menus. See Appendix D for more resources.

B. Behavioral design, marketing and educational strategies

Special marketing and educational materials featured in dining establishments can help diners make the connection between food, climate and health. Some dining halls that practice Meatless Mondays enhance the educational aspects of the program with large posters in the cafeteria that can be found in the Meatless Monday toolkit. The Humane Society of the U.S. also has a Meatless Monday toolkit, and Menus of Change has case studies and insights on marketing healthy and sustainable food.

Through product placement, description, incentives and pricing, municipalities can encourage diners to make healthier and more sustainable choices. When climate-friendly foods are more accessible, appealing and affordable, customers are more likely to choose them. For example, using decadent-sounding descriptions for vegetable dishes and integrating plant-based offerings with other offerings into the menu rather than creating a separate section for them may increase consumers' likelihood of choosing plant-based options.[146, 147] USDA's Smarter Lunchrooms describes how simple changes in the lunchroom can stimulate healthy eating.

C. Customer surveys

Customer surveys can be powerful tools that food service directors can use to determine whether changes are needed and if they are likely to succeed. For instance, a survey conducted in Rhode Island "revealed that employees wanted healthier options and that they were not purchasing many items because they were not healthy enough."[148]

The business case for climate-friendly and healthy food

Providing climate-friendly food will not only be good for our health and the planet but also for vendors' bottom lines. Studies consistently show that the public is looking for food service options that promote health, animal welfare and environmental sustainability.[149, 150, 151] In particular, consumer trends and attitudes generally favor increasing availability of plant-based and plant-forward menu items. While one in ten millennials follow a vegetarian diet, it is not just vegetarians who are seeking healthier foods.[152] 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.[153] A study by the Hartman Group and Changing Tastes (2015) 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" and that "today's diners prefer meals that are healthier for the environment." [154] Importantly, the study found that:

> 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. [155]

Many food service providers are aware of these trends and ready to provide such options. One Datassentials (2015) 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."[156] Consumers are ready for menu options that are better for human and environmental health. Public food service providers have an important role to play in meeting this demand and continuing to help drive consumers toward better choices.

xii Blended burgers blend meat with diced vegetables like mushrooms to create a delicious, healthier, more climate-friendly burger. See Better Burgers for more information.

Step 5: Update bid solicitation and contract language

Feedback from vendors can be used to create specifications, including mandatory and desirable criteria. It can also help inform the development of a point system which will rate bidders based on their ability to meet the jurisdiction's new food procurement policy goals or guidelines. It can also focus on incorporating the new standards into bid solicitations, such as invitations to bid (ITB), requests for proposals (RFQs) and requests for quotations and contracts. This process can take some time.

A. Decide which contracts and venues are priorities for initial and longer-term implementation

- Work with the procurement team to identify all major food commodity contracts, food service agreements, concessions contracts and approved caterer lists that cover food served by the municipality and on municipal-owned property. See Table 1 on page 18 for a list of potential areas of authority for municipal food.
- Assess the dollar amounts, as well as the types and annual quantities of food commodities purchased on each contract, to identify high-impact opportunities.
- Assess contract usage, especially for larger contracts, to determine the quantities of various types of food commodities that have historically been purchased. Remember that food service agreements include labor costs, which may make it difficult to calculate the amount spent on food commodities separately. Consequently, food service contractors may need to report their purchases of animal- and plant-based products separately. Note that it may be necessary to include this reporting as a contract requirement.
- Identify and review lease agreements that affect food served on government property to see how climate-friendly specification language could be inserted into their lease agreements. When leasing property to food businesses, for instance at sports stadiums and airports, municipalities can include a requirement in the lease agreement that the vendor meet its climate-friendly and healthy food standards — including details of the kinds of food that is expected to be served. See an example from the San Francisco Airport (SFO) on page 37.
- Determine which contracts will be up for renewal soon in order to identify "ripe" opportunities, and make a calendar of these dates. The best opportunity to change contracts is during the contract renewal process; however, it may be possible to make changes with vendors when optional contract extensions are negotiated. Focusing on concessions (e.g., at local parks, office buildings, airports or zoos) may be a good place to start since these entities may have more flexibility than large public institutions to modify their menus and offer more plant-forward options.
- Identify easy wins and consider running pilot purchasing tests with individual concessions. While the ultimate goal is to make climate-friendly and healthy food procurement the default for all applicable contracts, municipalities can learn through test cases. This will help identify and resolve potential problems that may occur with any new procedures before they are rolled out to all municipal departments and facilities. Developing and disseminating approved lists of vendors that can meet your municipality's climate-friendly food standards is one simple way to make progress.
- Once the high-impact or pilot contracts are identified, create a calendar of important bid solicitation dates and activities (e.g., sourcing team meetings, due dates for bid solicitations, pre-bid meetings, etc.) for the next one to three years.

B. Update bid solicitation documents to reference climate-friendly food standards

For large contracts that are used by multiple agencies, convene a sourcing team that is made up of food purchasers from different agencies to discuss how the climate-friendly food procurement policy language will function in the bid solicitation documents. Surveying sourcing team members on their needs for the contract can help get the process going and prevent pushback.

As a first step in their bid solicitation process, municipalities can issue a formal Request for Information (RFI) alerting existing suppliers and vendors, including caterers for municipal events, that the municipality wants to know more about the availability of plant-based foods and, if included in the policy, sustainably-sourced products.

Alternatively, purchasing agents can informally survey their bidders about the availability of climate-friendly food products. Feedback from vendors can be used to create specifications, including mandatory and desirable criteria. Feedback from vendors can be used to create specifications, including mandatory and desirable criteria. It can also help inform the development of a point system which will rate bidders based on their ability to meet the jurisdiction's new food procurement policy goals or guidelines. It can also be very helpful to hold a pre-bid meeting with prospective bidders to explain the climate-friendly food specifications and contract requirements, answer questions and make any necessary revisions. This will increase the likelihood of receiving multiple, competitive bids.

1. *Creating a bid solicitation document*

- Create boilerplate language that food buyers can cut and paste into their bid solicitations — or tailor to meet their needs — so they do not need to create specifications and draft contract language from scratch each time there is a new contract opportunity.
- Reference the municipality's food procurement policy in the bid solicitation's contract goals section or requirements so that potential bidders are clearly notified about your intention to purchase climate-friendly food.
- Insert a specifications section into the bid solicitation document to clarify the definition of climate-friendly food and list specific food procurement goals. If the climate-friendly procurement policy also encourages purchases of third-party certified food, include a list of those certification programs or any other sustainable food definitions in the bid solicitation document.
- Include a section that explains how bids will be evaluated, including benefits to bidders that offer products that meet the municipality's standards. The sourcing team should ensure that the solicitation's climate-friendly purchasing criteria are considered during the bid evaluation process and that each evaluator understands how to verify whether bidders meet contract requirements and goals.
- Bid solicitation documents can also require or give preference to bidders that demonstrate that they have some experience providing — and promoting consumption of — plant-based foods and beverages (and, if included in the policy, other third-party certified food products such as organic, local, higher animal welfare and grass-fed meat and dairy) to similar jurisdictions or institutions.
- Ensure effective tracking by stating in the bid solicitation document that, if awarded a contract, contractors must report to the appropriate municipal office the types and quantities of animal products, plant-based food and/or sustainably sourced food they provided to ensure they are meeting the jurisdiction's food procurement goals. This must include, at a minimum, total pounds of animal products by category (e.g., beef, pork, chicken, etc.), as well as the number of meals or individuals served. These reports should be required at least annually but may be required quarterly. See Appendix A for sample contract language, and see Step 6 (page 38) for more details about tracking and reporting.

Bid solicitation language for food commodity contracts

If the contract is for food *commodities*, the bid solicitation document should list all plant-based food products that should be offered in the contract. This may include widely used plant proteins such as soybeans, dried beans, lentils, chickpeas, tofu, tempeh, seeds, nuts or seitan,[xii] whole grains as well as prepared products such as pre-made blended burgers, veggie burgers, veggie burritos and almond, soy or coconut milk. High-volume items should be included in a market basket — or core list — of items for which the municipality is seeking deep discounts. Notify bidders that they will be evaluated based on their ability to provide products on the bid list (or equivalent products) and their pricing on products on the market basket list. Note that commodity contracts often are solicited with an Invitation to Bid (ITB), which uses pass-fail criteria and pricing on high-volume products to evaluate bids. Keep in mind that municipalities may also be able to obtain discounted products by buying food off of contracts negotiated by other public entities in and around the jurisdiction, including the state.

Bid solicitation language for food service agreements and concessions contracts

If the contract is for *food services or concessions*, the bid solicitation document is likely to be a Request for Proposals (RFP), which uses a point-based system to determine which contractor offers the best overall value or is best-aligned with your food procurement goals. The solicitation document can include mandatory requirements that the vendor meet your climate-friendly food or nutrition standards —as well as desirable criteria, which can earn bidders points toward winning the award. For example, the RFP can make it clear that bidders will be rewarded in the bid evaluation process if they can demonstrate experience serving healthy and climate-friendly foods or if they can present a plan showing how they will successfully transition to offering climate-friendly food products and, if included in the jurisdiction's policy, food with other sustainability benefits (e.g., organic or locally sourced). RFPs should also require bidders to demonstrate that they can effectively track and report on these changes. The food procurement working group (see Step 1 on page 17) should design the point system to reflect the jurisdiction's food procurement policy goals or guidelines. The model climate-friendly food standards (see Appendix A) created for this guide could be inserted into an RFP for food service contracts. For an example of how to craft a bid solicitation and scoring rubric to incorporate new sustainable food criteria, see The Setting the Table for Success Toolkit.[157]

2. *Examples of bid solicitation language*

Alameda County, CA has incorporated language into its bid solicitation for food services requiring each contracted vendor to create a "Sustainable Food Service Action Plan" that addresses the environmental and social impacts of the products it provides.[158] Below are several key provisions of this Request for Proposals (RFP), which awarded points to bidders that did an exemplary job explaining how they will address sustainability issues when providing food services to the County. Among other things, contractors are required to describe how they will reduce the environmental impacts of their operations and promote the consumption of climate-friendly foods while providing food service to the County:

> At a minimum, the Plan shall identify efforts the Contractor will take to minimize the generation of waste, divert waste that is generated from landfill, and *strategies to minimize the life cycle environmental and social impacts associated with the provision of food* [emphasis added].[159]

Examples of efforts the contractor shall address include: "food sourcing strategies to minimize lifecycle greenhouse gas emissions intensity of food, such as locally grown foods, moving toward protein sources with lower emissions profiles and towards food produced with no or low chemical inputs (e.g., fertilizers and pesticides)."[160]

The RFP also notifies contractors that they will be required to "develop and track metrics that measure and evaluate achievement in meeting the goals of the Plan" and report metrics quarterly.[161]

The **federal government** incorporated sustainable food guidelines into its bid solicitation documents.[162] In 2012, the U.S. General Services Administration (GSA) issued a bid solicitation for cafeteria services referencing the *Health and Sustainability Guidelines for Federal Concessions and Vending*:

> Menus: It shall be the responsibility of the Contractor to provide a variety of quality prepared foods that are a model for wellness and sustainability and in accordance with latest industry trends and standard practices and the industry's latest innovative concepts… The Contractor shall offer food that provides wide variety to customers, including vegetarian, vegan, organic, healthy and light eater.

The federal government is working toward providing healthier food at its cafeterias and concessions. The GSA is implementing new wellness (and sustainability) criteria for food services at the properties it manages. The wellness criteria for selecting food service operators include whether concessionaires will use a registered dietitian or nutritionist when preparing menus, use healthier cooking techniques as much as possible, provide nutrition information and use a pricing strategy that promotes healthier choices.[163]

See Appendix G for specific model language from the RFP Template for Sustainable Food Service that directs contractors to offer healthy and sustainable food products.

The San Francisco Airport (SFO) actively seeks locally-owned food businesses that serve local, healthy and sustainable food via requirements in its RFPs. Here is a sample lease that was posted in an RFP for SFO, which could be adapted to incorporate climate-friendly food:

> In compliance with Executive Directive 09-03 issued by the Office of the Mayor on July 9, 2009, Tenant is required to provide good, clean, and fair food which has been responsibly sourced and deliciously prepared. Tenant is encouraged to ensure that at least 25% of the meals offered on the menu meet the nutritional guidelines set forth in San Francisco Administrative Code section 4.9-1(e), as may be amended. The following must be adhered to throughout the term of the Lease.
>
> **Tenant must feature:**
>
> 1. Displays that promote healthy eating and good environmental stewardship
> 2. Visible food preparation areas
> 3. Portion sizes which support good health
> 4. Portion-appropriate menu items for children
>
> **Tenant must use:**
>
> 5. Low- or non-phosphate detergents
> 6. Un-bleached paper products and compostable To Go containers and utensils.
>
> To the very greatest extent possible, Tenants must use:
>
> 7. Organic agricultural products from the Northern California region
> 8. Agricultural products that have not been genetically modified
> 9. Organic or all-natural meat from animals treated humanely and without hormones or antibiotics
> 10. rBST-free cheese, milk, yogurt and butter
> 11. Cage-free, antibiotic-free eggs
> 12. Sustainable seafood
> 13. Fairly Traded Organic Coffee
> 14. Products free of hydrogenated oils
> 15. Products free of artificial colors, flavors and additives[164]

C. Award contract(s) and monitor compliance

Food procurement goals, standards and requirements should be included in the contract that the municipality awards to one or more vendors of food commodities or services. For example, municipalities can include a requirement in the lease agreement that the vendor meet their climate-friendly food standards, including details of the kinds of food that is expected to be served.

- Consider making the climate-friendly food contract available to other nearby jurisdictions. Cooperative purchasing is a strategy that can help secure lower prices for sustainable food and other environmentally preferable products (EPPs) by aggregating demand. Adding "piggy-backing" language to a contract also can prevent other municipalities from having to go through the time-consuming process of soliciting EPPs on their own.
- Beyond working with other jurisdictions to develop cooperative agreements around plant-based food (or food that meets other

xii Friends of the Earth opposes the use of ingredients derived from genetic engineering in plant-based foods due to lack of adequate assessments and regulatory frameworks.

sustainability criteria included in the policy), municipalities can may be able to gain access to lower-cost products by utilizing existing cooperative agreements that have been negotiated by the state. One example is the Commonwealth of Massachusetts' grocery contract, which can be utilized by local governments as well as other public and non-profit entities in the state.[165] It offers organic food on its central grocery contract. It may take several municipalities working together to get the state to add climate-friendly staple foods to its grocery contract.

- Monitor contractor compliance early and often. Meet with vendors shortly after the contract is awarded to discuss their plans to promote the climate-friendly products in their offering, meet the minimum contract goals, and achieve continuous improvement over time. As noted on page 36, **Alameda County, CA** works with vendors to develop an annual "Sustainability Plan," which explains how the contractor is going to implement the contract to meet the County's sustainability goals. This Plan, which is updated annually, includes benchmarks and is used throughout the year.
- To ensure consistent reporting among multiple vendors, municipalities can include a reporting template in the contract award package.

"Sustainability plans are key. While the contract language confirms that all parties are committed to sustainability in the services provided, the plan further defines how sustainability will be applied in practice. It also provides an opportunity for all parties to be brought in on the details and timetable of implementation, which is crucial for complex environments like food service."

— Sarah Church, Sustainability Project Manager, County of Alameda, CA

Step 6: Track and report progress

To understand if a food purchasing policy is successful, its impacts must be measured. By establishing a system for tracking and reporting on purchases, a municipality can assess whether it is on track to meet its policy target for reducing the carbon footprint of food served on municipal property.

A. Choose a method for tracking purchases

To effectively track the carbon footprint and costs of municipal food procurement practices, it is important to collect baseline data on the volume and costs of food purchased in different food categories before any changes take place, as well as the number of customers or meals served. Using this baseline data, a municipality can compare environmental impacts and expenditures before and after implementing climate-friendly food policies and practices. It is important to measure changes per meal, as well as in aggregate, because meal-level analysis accounts for the fact that the number of meals served may change over time. This information will help staff illustrate environmental benefits and potential cost-savings of climate-friendly initiatives, which can be used to justify additional climate-friendly and healthy food procurement practices.

While tracking the embedded emissions of all major food groups is ideal, it may be more feasible to initially focus on tracking animal product purchases by weight and by cost. Since animal products are responsible for the vast majority of the greenhouse gas emissions associated with the food served, tracking GHGs associated with just the purchase of animal products can provide a good approximation of the avoided GHG reductions. If a municipality take this approach, calculations should be based on assumptions about the average GHG footprint of replacement foods. As seen in Figure 5 (page 39), before implementing its meat reduction program, 76 percent of Oakland Unified School District's embedded carbon emissions came from animal products.[166]

A menu-based approach can be an alternative, simpler and effective way to compare carbon footprints and cost-savings. One can fairly quickly measure the benefits of switching two or three

high-meat recipes with low-meat or plant-based alternatives. By estimating the number of meals served and the number of times the low-meat or plant-based recipe was served in a year, this method can quickly generate valuable data on consumption-related GHG reduction benefits.

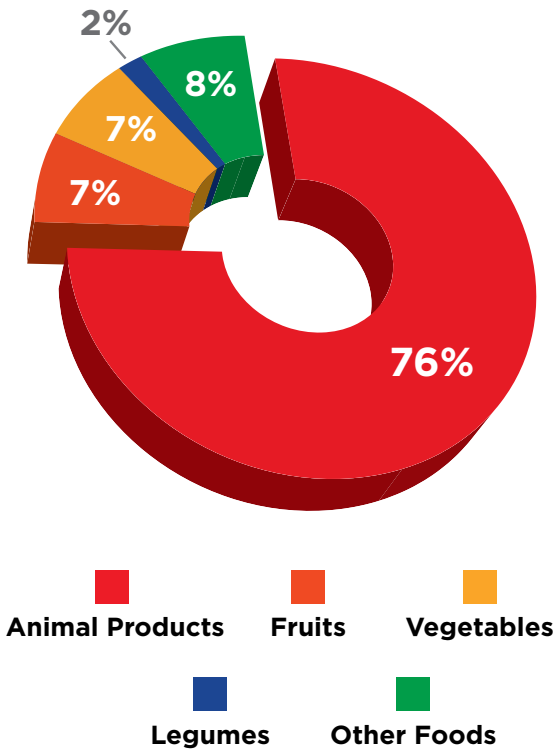
Universities may be able to help with data analysis. For example, the Center for Public Health Nutrition at the University of Washington School of Public Health has provided valuable program evaluations for the State of Washington.

Data sources for carbon footprint

There are various peer reviewed data sets that municipalities can use to track their avoided emissions from food purchasing shifts. Friends of the Earth's Oakland Unified School District footprint analysis used the lifecycle analysis conversion factors based on peer-reviewed data contained in a 2014 report authored by Heller & Keoleian.[169] The Heller & Keoleian (2014) data are from a large meta-study that produced global averages of lifecycle assessments (LCA) of the carbon dioxide equivalent emitted per kilogram of food product produced from each stage of production from the farm to the retail level (kg CO_2-eq • kg-1). The data presented in this report are similar to another comprehensive LCA data set from Clune, Crossin & Verghese (2016).[170] See Appendix E for a chart with Heller & Keoleian's lifecycle assessment conversion factors for common foods.

Figure 5. Oakland Unified School District carbon footprint by food group

(2012-13 school food purchases)



Source: Hamerschlag, K. & Kraus-Polk, J. (2017). *Shrinking the carbon and water footprint of school food: A recipe for combating climate change: A pilot analysis of Oakland unified school district's food programs*. Friends of the Earth.

"Partnering with the University of Washington Center for Public Health Nutrition (CPHN) for evaluation is a huge asset to WA DOH's Healthy Nutrition Guidelines work. CPHN's unbiased perspective provides consistent and valuable information, and we use the evaluation results to inform program planning and monitor implementation of the Healthy Nutrition Guidelines."

—Alyssa Auvinen, Healthy Eating Coordinator (formerly), Washington State Department of Health

B. Develop tracking and reporting procedures

In order to ensure access to the necessary data, contracts should specify that food service providers and/or suppliers consistently track the weight and dollar amount of animal products, along with the number of meals or people served, and report the data to the appropriate person, such as a procurement or food service director. Information should flow from contractors and vendors through agencies subject to the policy to the agency overseeing the broader implementation of the policy. Reporting should happen at least annually, if not more frequently. The procurement specialist or food service director will typically be charged with compiling all of this information from its contractors and reporting to the agency overseeing the implementation of the broader food procurement policy. See Appendix A for model contract language to ensure good tracking practices adapted from **Los Angeles County, CA's** food service RFP.

Low-cost tracking resources

Tracking the climate impacts of meat and dairy purchases is a relatively new field, but there are resources available that can make this task easier. IntoFood provides a fee-based software that conducts sustainability data analysis of recipes and food purchasing activities.[167] It analyzes the embedded carbon emissions of all major food items, identifies which food categories emit the most GHGs, and maps trends over time to demonstrate the overall carbon footprint of a food service operation, including the impacts of animal products versus plant-based foods. Municipalities can purchase IntoFood's services, which includes generating reports on a monthly, quarterly or annual basis, reducing workload.

The University of New Hampshire's Sustainability Indicator Management and Analysis Platform (SIMAP) is another online tool for institutions to measure, report and manage carbon footprints.[168] It is primarily intended for university dining service but can be adapted for municipal food service settings.

Friends of the Earth can also provide technical assistance and link municipalities with other useful resources.

CONCLUSION

Communities across the U.S. are contending with the major human and economic costs of climate change and diet-related diseases. Fortunately, cities and counties have the power to make a meaningful impact by shifting municipal food purchases towards plant-based and plant-forward options. This approach delivers crucial benefits not only for municipal employees and other consumers of municipal food but for everyone who stands to prosper from a healthier planet. Adopting healthy and climate-friendly procurement policies and practices that emphasize less meat and more plant-based foods takes time, collaboration and patience. This guide is offered in the spirit of helping communities devise locally appropriate solutions taking into account that each municipality's needs and resources will be different.

To this end, Friends of the Earth and the Responsible Purchasing Network hope that the technical resources, tools and strategies offered in this guide are helpful for municipalities that want to increase healthy and climate-friendly food offerings—both within their own food service operations and in venues that are operating on municipal property or at municipal events. Whether these shifts are made for health, environmental or cost-saving reasons, municipalities that promote plant-forward diets will experience a unique triple win for community well-being, local budgets and the planet.

APPENDIX A
Model climate-friendly food purchasing policy and standards

Background:

This model policy and corresponding standards are geared toward reducing embedded greenhouse gas emissions associated with municipal food purchases or foods served on municipal property.[i] The model climate-friendly food purchasing policy includes several components: a model ordinance or executive order, policy targets, definitions, food standards and model tracking language for contracts. Jurisdictions may choose to adopt all of these components in one policy vehicle, though most likely they will be adopted through distinct processes. For instance, the standards, which address which food is *served* as opposed to food *purchased*, may be adopted by municipalities without a formal purchasing policy. In some cases climate-friendly provisions could be integrated into existing health or nutritional standards.[ii] This model policy and standards are offered with the understanding that municipalities face varying financial and political limitations and may choose to pursue only certain aspects of this policy or enact the policy through an incremental approach that applies to a limited number of entities purchasing or serving food. This policy was developed by Friends of the Earth and the Responsible Purchasing Network with feedback from a range of knowledgeable individuals and organizations (see the Acknowledgements). We welcome feedback and look forward to seeing how municipalities adapt this for their particular circumstances.

1. Model ordinance or executive order

WHEREAS [city/county] recognizes the importance of supporting the health and safety of its employees and community, preserving and protecting our planet for future generations, and promoting the vitality of our economy;

WHEREAS the food sector is a significant contributor to global greenhouse gas (GHG) emissions, with livestock production accounting for 14.5% of global GHG emissions, and the United Nations recognizing that "Livestock are one of the most significant contributors to today's most serious environmental problems;"

WHEREAS food represents a significant portion of a municipality's consumption-based GHG emissions but is not currently addressed in [city/county's] climate action planning;

WHEREAS greenhouse gas emissions from plant-based protein foods such as beans, lentils, peas and tofu are considerably lower than those from beef, pork, cheese and other animal products;

WHEREAS a diet high in plant-based foods and low in meat is recognized by leading experts to reduce risks of cardiovascular disease, obesity, hypertension and diabetes, and more than two thirds of adults and nearly a third of children and teens are overweight and obese in the United States, and obesity is associated with a higher risk of various health ailments including heart disease and type-2 diabetes;

WHEREAS Americans eat, on average, significantly more meat and significantly less plant-based food than is recommended by the Dietary Guidelines for Americans jointly developed by the United States Department of Agriculture and the Department of Health and Human Services;

WHEREAS [city/county] can reduce its greenhouse gas emissions and improve the health and well-being of its employees and community residents by purchasing and serving less meat and more plant-based food in facilities operating on municipal property; now, therefore

i See page 12 for an explanation of embedded GHG emissions.
ii See page 29 for an explanation of when a municipality may be able to enact standards in lieu of a formal purchasing policy.

BE IT ENACTED that [city/county] shall substantially reduce its greenhouse gas emissions associated with its food purchases and food sold on municipal property by its vendors.[iii],[iv]

Within one year of enactment, [overseeing agency, department, or office] shall establish:

a. a time-bound target for reducing the greenhouse gas emissions associated with the consumption of animal products;

b. climate-friendly food standards and purchasing targets;[v]

c. a list of departments, facilities and other entities covered by the policy;[vi] and

d. a plan for tracking the greenhouse gas emissions associated with the implementation of the standards that includes tracking animal product purchases by weight. [vii],[viii]

Within 60 days of the establishment of the standards, the standards shall be distributed to [city/county] covered entities implementing the policy. Within 150 days of receiving the standards, each covered entity shall provide to the [overseeing agency] a plan to incorporate the standards into all [city/county] food commodity contracts, food service agreements, leases that cover food concessions and restaurants on municipal property, and agency meetings and events where food is served.

[City/county] departments permitting mobile food vendors shall either apply food standards, issue percentage targets for the sale of plant-based foods or give preferences to businesses that sell such food.

[City/county] departments shall provide documentation of implementation to the [entity overseeing implementation] within 2 years after the issuance of the standards. Every year thereafter, departments shall provide an annual report to [overseeing agency] showing progress meeting GHG emissions reduction and purchasing targets. Staff from [relevant departments, such as department of health and/or department of the environment] will provide guidance and technical support.

2. Model policy target

Covered entities shall reduce the carbon footprint of animal product purchases by:

- 8 percent within two years of adoption of the policy;
- 25 percent within five years; and
- 30 percent within eight years..[ix, x ,xi, xii]

iii A reduction in water usage could be added to this goal depending on the jurisdiction's preferences.

iv In order to simplify baseline data gathering, municipalities could focus solely on animal products because those typically represent 70-80% of total GHGs associated with food and are much easier to track. See Step 6 (page 38) on tracking and reporting progress.

v See "Model Policy Targets". These could be included directly in the policy or be part of the standards.

vi This could include municipal-run facilities (e.g., hospitals) and food served on municipal properties (e.g., stadiums). For a full list of potential entities that could be subject to the policy, see Table 1, page 18. This model ordinance could also specify which entities are covered directly as opposed to establishing the scope of the policy through the implementation process.

vii Implementation periods will vary depending on the jurisdiction, but the policy should lay out a specific timeframe for various stages of implementation in order to create accountability.

viii The plan for tracking GHG emissions will necessitate a baseline assessment of the embedded emissions associated with a municipality's food purchases or food purchased on municipal property; or at a minimum the amount of animal products being purchased. See Step 6 (page 38) for suggestions on tracking and reporting progress.

ix The 5 year target mirrors the Good Food Purchasing Program's target and focuses specifically on animal products since these are easier to track than the entire amount of food purchased and sold by municipal food operations or food venues on municipal property. Once tracking systems are established, it is ideal to create a target that is aimed at reducing the carbon footprint of all food.

x Special calculations of carbon reductions for "grass-fed or oganic meat" that may have a lower carbon footprint than its conventional counterparts could be considered in cases where a municipality is purchasing a significant amount of this kind of meat and dairy and there is a credible analysis has been conducted to evaluate the carbon emissions associated with the production of that particular animal product.

xi Reducing – and eventually eliminating – processed meat, which has been classified as a known carcinogen by the World Health Organization's International Agency for Research on Cancer (IARC), should be a key strategy in meeting this target.

xii For a table that lists CO_2eq of major food groups, see Appendix E

3. Model policy definitions

Animal products shall include meat, poultry, dairy, eggs and seafood.

Dairy shall include food produced from or containing the milk of mammals.

Meat shall include lamb, beef, pork and goat products.

Plant-based shall mean food that is wholly derived from plants, including but not limited to vegetables, legumes, grains, mushrooms, nuts, seeds and fruits.[xiii]

Seafood shall include freshwater and saltwater fish and shellfish.

4. Model standards

These standards are meant to apply to concessions, cafeterias and restaurants on local government property as well as food served in all institutional settings, including settings where there is typically only one main dish available to customers at a time.

- At least one entirely plant-based option must be made available at every meal, emphasizing high-protein, plant-based foods such as peas, lentils, soy and other beans.[xiv]
- Prioritize protein-rich plant-based foods and ensure that at least 20 percent of main dishes served per week are plant-based within 2 years and at least 5 percent more main dishes are plant-based each year after up until at least 40 percent of main dishes are plant-based.[xv]
- Meat, poultry and/or eggs must not exceed 3.7 ounces per meal (or 3.7 ounces per day if serving several meals to the same people).[xvi, xvii]
- If serving dairy-based milk, offer at least one unsweetened, non-dairy option.
- Drinking water must be offered at no charge at every meal.[xviii]

Additional requirements that apply only to concessions, cafeterias and restaurants on local government property include the following:

- One entirely plant-based main dish option must be on the menu at each meal, emphasizing high-protein, plant-based foods such as chickpeas, lentils, soy and other beans.
- Make available reduced-size portions for at least 25% of menu items offered — prioritizing dishes that include animal products.[xix] Reduced-size dishes should be priced proportionally to full-sized portions.[xx]
- When offering multiple meat and/or poultry options, include at least one main dish that features less than less than 2 ounces of animal protein, either by including meat and/or poultry as a condiment, as part of a blended option or as a mixed meat vegetable dish. [xxi, xxii]

xiii Friends of the Earth strongly discourages the use of plant-based foods that are derived from genetic engineering due to lack of safety testing and inadequate regulatory frameworks.

xiv This guideline should be inclusive of options to substitute a plant-based protein to a dish that otherwise contains animal products.

xv Reducing – and eventually eliminating – processed meat, which has been classified as a known carcinogen by the World Health Organization's International Agency for Research on Cancer (IARC), should be a key strategy in meeting this target.

xvi Daily ounce limit is based on the *Dietary Guidelines for Americans* recommended servings of 26 ounces of meat, poultry and eggs per week for an average 2000 calorie diet.

xvii Reducing portion sizes of meat is a key strategy for reducing greenhouse gas emissions associated with food purchases while also adhering to the *Dietary Guidelines for Americans*.

xviii Water has the lowest carbon footprint of all beverages.

xix As described in the Good Food Purchasing Standards, reduced-sized portions are at least one third smaller than the full-size item and are offered in addition to the full-size versions.

xx This guideline is intended to reduce GHGs and reduce food waste and is modeled on language from the Good Food Purchasing Standards. See page 13 for more information about the link between food waste, particularly food waste associated with animal products, and GHG emissions.

xxi A condiment size portion should be less than 1 ounce and ideally less than .5 ounces.

xxii A blended option is anything that has meat blended with a plant-based food. See page 33 for an example of a blended burger.

5. Model tracking language for contracts

Contractor shall comply with all climate-friendly, [healthy and sustainable] food guidelines outlined in this Agreement, as well as any future food procurement policies approved by [governing body]. [Overseeing entity] may periodically monitor the Contractors' compliance with the guidelines. Contractor is required to submit quarterly to [relevant staffperson] the following records: food production records, product inventory, purchasing lists, itemized monthly sales and a complete nutrition analysis of all menu products/items offered. Meat and dairy amounts shall be reported in pounds broken down by general product type (beef, chicken, pork, cheese, etc.). [Overseeing entity] shall review records and communicate its findings to [entity responsible for food purchasing policy implementation]. Failure to comply with the food guidelines may, in [overseeing entity]'s sole discretion, constitute a breach of this Agreement. Contractor may contact [relevant staffperson, phone, and email] if Contractor has questions on the climate-friendly [healthy and sustainable] food guidelines and compliance.[xxiii]

xxiii This tracking language is based off of language in an RFP from Los Angeles County, CA.

APPENDIX B
Additional considerations for a broader sustainable food procurement policy

Reducing meat and dairy purchases is a core, measurable strategy to mitigate consumption-related climate impacts that also has clear benefits to human health. At the same time, reducing meat and dairy purchases may save money that can be used to purchase more sustainable food that is locally or regionally produced,[i] organic[ii] or third-party-certified grass-fed[iii], fair trade or humane. Given that some municipalities will want to address climate-friendly food procurement in conjunction with broader sustainability goals, we have included suggested policy language, purchasing targets and definitions for those other sustainability criteria. The certifications included in this model policy have been endorsed by The Center for Good Food Purchasing and/or Real Food Challenge based on a comprehensive community consultation process. In Appendix C, we provide additional background on several of the third-party certifications for animal products that have been endorsed by these organizations. The language below can be incorporated into the climate-friendly purchasing policy and standards (see Appendix A) depending on a municipality's goals and resources.

1. Sustainable food procurement policy language

Additions to the model climate-friendly food procurement policy above are italicized.

WHEREAS supporting local food production helps protect farmland, build a prosperous local economy and can reduce transportation- and urban-sprawl-related greenhouse gas emissions;

WHEREAS organic agricultural practices and certified organic products eliminate chemical pesticide and fertilizer use and can have important climate benefits, including reduced energy use and carbon sequestration;

WHEREAS the overuse of antibiotics in livestock contributes to antibiotic resistance in humans, a public health crisis that kills at least 23,000 people each year according to the U.S. Centers for Disease Control and Prevention;

WHEREAS many species of fish are overfished or caught or farmed in ways that harm marine life or the environment;

WHEREAS third-party certified food products such as American Grassfed Association Certified by A Greener World 100% grassfed, Animal Welfare Approved, Global Animal Partnership Steps 3-5+ and Certified Humane Raised and Handled promote higher animal welfare practices and do not allow for the routine use of antibiotics;

WHEREAS ecological certifications such as Rainforest Alliance, Protected Harvest, Food Alliance, Grasslands Alliance and USDA Transitional Organic require production practices that are beneficial to the environment;

WHEREAS Fairtrade USA, Ecocert Fair Trade Certified, Fairtrade America, Fair for Life, FairWild, Hand in Hand, Equitable Food Initiative and Food Justice Certified demonstrate a commitment to fair trade or fair labor practices;

WHEREAS Seafood Watch has developed a set of "best choice" recommendations for fish and seafood that are well-managed and caught or farmed in ways that cause minimal harm to habitats or other wildlife; and

i Locally and regionally produced food can also have climate-specific benefits, but they are harder to measure. See page 16.

ii In some cases, organically produced food—including pasture-raised animal products-- can also have smaller climate impacts than their conventional counterparts, but vary by production systems and are harder to measure. See page 16.for a discussion on the climate benefits of regenerative, organic agriculture.

iii When considering carbon sequestration in soils, several studies have found that some U.S. pasture-based and cattle grazing systems produce a smaller carbon footprint than industrial confinement systems. For more information on the environmental and health benefits of well-managed grass-fed livestock, see Less and Better Meat is Key to a Healthier Planet.

WHEREAS [city/county] can improve the health and well-being of its employees and residents as well as animals, workers, farmers and the planet by purchasing lower carbon-intensive food and food *that is certified organic, higher animal welfare, grass-fed and fair trade; locally or regionally produced; or produced without routine antibiotics.*

BE IT ENACTED that [city/county], for all food purchased by [city/county] and for all food sold on municipal property by its vendors, shall substantially:

a. reduce its embedded greenhouse gas emissions; and

b. increase the amount of food that is certified organic, grass-fed, higher animal welfare, ecological and fair trade; locally or regionally produced; and produced without routine antibiotics.

Within one year of enactment, [overseeing agency, department, or office] shall establish:

a. a time-bound target for reducing greenhouse gas emissions associated with animal food purchases *and for meeting purchasing targets for food that is certified organic, grass-fed, higher animal welfare, ecological and fair trade; locally or regionally produced; produced without routine antibiotics and;*

b. sustainable and climate-friendly food standards and purchasing targets;

c. a list of entities covered by the policy; and

d. a plan for tracking:

    1) the amount of food that is certified *organic, grass-fed, higher animal welfare, ecological and fair trade; locally or regionally produced; produced without routine antibiotics;* and

    2) the greenhouse gas emissions associated with the implementation of the standards that includes tracking animal product purchases by weight.

Within 60 days of the establishment of the standards, the standards shall be distributed to [city/county] departments and other municipal entities implementing the policy. Within 150 days of receiving the standards, each department shall provide to the [overseeing agency] a plan to incorporate standards into all [city/county] food contracts, leases that cover food concessions and restaurants on municipal property, agency meetings and events where food is served.

[City/county] departments permitting mobile food vendors shall:

a. apply food standards;

b. issue percentage targets for the sale of foods that are plant-based, certified *organic, higher animal welfare, grass-fed and ecological; locally or regionally produced; and produced without routine antibiotics; or*

c. give preferences to businesses that sell such food.

[City/county] departments shall provide documentation of implementation to the [entity overseeing implementation] within 2 years after the issuance of the standards. Every year thereafter, departments shall provide an annual report to [overseeing agency] showing progress on emissions and purchasing targets. Staff from [relevant departments, such as department of health and/or department of the environment] shall provide guidance and technical support.

2. Sustainable purchasing targets[iv]

Within 2 years of implementation, at least 10 percent, and within 5 years, at least 25 percent of all plant-based food purchases must be certified organic or ecological.

Within 2 years of implementation, at least 15 percent of food and beverages purchases shall be locally or regionally produced, of which at least 5 percent should be locally produced; within 5 years, at least 25 percent of food and beverages purchases shall be locally or regionally produced, 10 percent of which should be locally produced.

Within 2 years of implementation at least 15 percent and, within 5 years, at least 25 percent of animal products must be certified as grass-fed, higher

iv Most of these targets mirror those established in the Good Food Purchasing Standards level 2 and 3, which allow entities to comply with its environmental standard either by reducing greenhouse gas emissions associated with animal products or by purchasing a percentage of its food from environmentally sustainable sources. While GFPP establishes most of the initial targets for 1 year, we have provided 2 years to allow more time to find adequate supply of third-party certified products.

animal welfare, organic, or ecological.

Within 2 years of implementation, at least 5 percent of products and within 5 years at least 15 percent of products must be from fair trade sources.

Within 2 years of implementation, at least 30 percent and, within 5 years, at least 60 percent of animal product purchases must be produced without the routine use of antibiotics.

Within 2 years, at least 25 percent and, within 5 years, at least 50 percent of seafood purchased should be listed as "Best Choice" and no seafood purchased listed as "Avoid" in the Monterey Bay Aquarium's most recent Seafood Watch Guide.

Definitions

Higher animal welfare shall mean a product has been certified as Animal Welfare Approved, Global Animal Partnership (Steps 3 through 5+), Certified Humane Raised and Handled or other certifications deemed meaningful by the Center for Good Food Purchasing at level 2.

Grass-fed shall mean animal products that are certified as 100% Grass-fed, Certified Grassfed by A Greener World, Certified Grassfed by Food Alliance or certified by the American Grassfed Association or other certifications deemed meaningful by Real Food Challenge or the Center for Good Food Purchasing.

Locally produced food shall mean food that is:

1. produced by a privately or cooperatively owned enterprise;
2. if the food is produce,
   i. produced and processed at a facility located within a 250-mile radius of the city/county;
   ii. (ii) procured from a farm that grosses $5 million/year or less; and
3. if the food is meat or poultry,
   i. produced and processed at a facility located within a 500 mile radius of the city;
   ii. procured from a farm or a company that grosses $50 million/year or less.[v]

Certified Organic shall mean a product that has been certified by the United States Department of Agriculture's National Organic Program established pursuant to the federal Organic Foods Production Act of 1990 (7 U.S.C. Sec. 6501 et seq.) and the regulations adopted for implementation. Demeter Certified Biodynamic products shall be considered equivalent to Certified Organic for the purposes of this section.

Ecological certified products refer to products that require production practices that are beneficial to the environment and have been endorsed by Center for Good Food Purchasing (level 2) or Real Food Challenge, including Rainforest Alliance, Protected Harvest, Food Alliance, Grasslands Alliance and USDA Transitional Organic or seafood products that are considered "best choice" by Seafood Watch.

Fairtrade certified products refer to products that have been certified by Fairtrade USA, Ecocert Fair Trade Certified, Fairtrade America, Fair for Life, FairWild, Hand in Hand, Equitable Food Initiative or Food Justice Certified.

No routine antibiotics shall mean that use of antibiotics is limited to treatment of animals diagnosed with an illness or controlling a verified disease outbreak.

Regionally produced food shall mean a food product that is raised, produced, and distributed in (a) the locality or region in which the final product is marketed, so that the total distance that the product is transported is less than 400 miles from the origin of the product; or (b) the State in which the product is produced, except that if the food product is meat or poultry, regionally produced food shall also include a food product that is raised, produced and distributed in the locality or region in which the final product is marketed, so that the total distance that the product is transported is less than 600 miles from the origin of the product.

v This definition is from the Real Food Challenge standards. See Appendix D for more about the Real Food Challenge standards.

APPENDIX C

Meaningful third-party certifications for animal products

Municipalities can use money that is saved from purchasing fewer conventional meat and dairy products to buy third-party certified products that can deliver broader health, fair labor, animal welfare and environmental sustainability benefits. The third-party certifications listed below include the top credible, most widely available and rapidly growing third-party certifications for animal products that have been endorsed by either the Real Food Challenge or the Center for Good Food Purchasing. Both of these organizations have vetted these certifications through a comprehensive community consultation process. Local governments can request third-party certified products from their existing distributors or secure new vendors that offer a greater supply of these products.

Organic

USDA ORGANIC: No GMOs, synthetic pesticides or fertilizer used to grow the feed. No antibiotics or hormones added. Animals have access to outdoors. Sheep, cows and lambs must have access to pasture, though there are no meaningful animal welfare standards.

Animal welfare

ANIMAL WELFARE APPROVED: Continuous access to pasture or range. No feedlots. Cage confinement, hormones, growth promoters and routine antibiotics prohibited. Standards extend to breeding animals, transport and slaughter.

CERTIFIED HUMANE RAISED AND HANDLED: Continuous outdoor access for ruminants. Cage confinement, hormones and routine antibiotics prohibited. Outdoor access not required for birds and pigs, but minimum space allowance and bedding required for indoor environments. Feedlots permitted with better than conventional standards. Standards extend to breeding animals, transport and slaughter.

GLOBAL ANIMAL PARTNERSHIP (Steps 3 and above): Applies to animals raised for meat (not eggs or milk) and applies to transport but not breeding or slaughter. No hormones or routine antibiotics. Step 3: No cages and crates. Outdoor access required but not pasture. Step 4: Access to pasture required. Step 5: Feedlots prohibited. Step 5+: Animals must spend entire lives on one farm.

Grass-fed

AMERICAN GRASSFED ASSOCIATION: Allows cows, sheep and goats continuous access to pasture. 100% of the feed must be grass/forage, no feedlots. Use of hormones and antibiotics prohibited.

CERTIFIED GRASSFED by AGW: Animal Welfare Approved and cows, sheep and goats continuously have access to pasture throughout their entire lives.

Multi-category

RAINFOREST ALLIANCE: Applies to crops and cows only. No mistreatment of workers. Must meet a certain number of a range of targets in the areas of biodiversity conservation, natural resource conservation, employment conditions and wages and occupational health and safety. For cows, destruction of forests, protected areas or other natural ecosystems is prohibited. Hormones and routine antibiotics prohibited. Must meet a certain number of a range of targets in the areas of sanitation, animal welfare, land degradation and herd genetics.

APPENDIX D
Resources

Guides and toolkits for healthy and sustainable food purchasing

- Association for the Advancement of Sustainability in Higher Education published *A Guide to Developing a Sustainable Food Purchasing Policy*, which offers resources for establishing goals, creating action plans, communicating accomplishments and understanding food-related claims and certifications.
- ChangeLab Solutions published this simple, user-friendly *Guide to Healthy Food Procurement*.
- The Johns Hopkins Center for a Livable Future has a useful report called *Instituting Change: An Overview of Institutional Food Procurement and Recommendations for Improvement*.
- Harvard and the Johns Hopkins Center for a Livable Future have created a toolkit called *Good Laws, Good Food: Putting Local Food Policy to Work for Our Communities*, which has a chapter specifically addressing food procurement policy.
- The Food Literacy Center has a short blueprint for Local Food Procurement Policies that summarizes different purchasing policy strategies around local food, which could be adapted to apply to climate-friendly food.
- Kaiser Permanente has a *Healthy Eating at Work Food Policy Toolkit*, which includes a step-by-step guide for employers to implement a healthy eating policy in the workplace.
- PolicyLink offers a *Local Food Procurement Toolkit*.
- The Responsible Purchasing Network (RPN) created a comprehensive guide highlighting green purchasing best practices in collaboration with the Urban Sustainability Directors Network (USDN). This resource, *The Buck Starts Here: A Sustainable Procurement Playbook for Cities*, explains how cities across the U.S. and Canada have implemented sustainable procurement policies and practices that have yielded measurable environmental, health and economic benefits. The RPN also published a report on *Local and Sustainable Food Procurement by New England State Governments: Barriers and Recommendations*.
- The Sustainable Purchasing Leadership Council has a section on food procurement in its *Guidance for Leadership in Sustainable Purchasing* available to members.

Technical Assistance, Culinary Training and Recipes

- Friends of the Earth provides technical assistance for climate-friendly and sustainable food purchasing, tracking and reporting. Contact: cwaterman@foe.org
- The Responsible Purchasing Network (RPN) provides hands-on technical assistance to local governments and other public entities that want to design an effective sustainable procurement program.
- The Center for Good Food Purchasing provides technical assistance and support to municipalities or institutions that are interested in adopting the Good Food Purchasing Program (see Appendix G1), including assistance with tracking and reporting.
- Health Care Without Harm provides technical assistance to hospitals and has a wealth of resources to support purchasing in hospitals as well as other institutions. Health Care Without Harm gives specific purchasing guidance for protein foods in its *Redefining Protein* report and for meat in this resource created with Practice Greenhealth. Health Care without Harm's Balanced Menus Initiative, is

a two-tiered approach for hospitals to reduce their meat and poultry purchases, and invest their cost savings in more sustainable meat options. The organization offers the following resources: Balanced Menus Booklet, Brochure for Dietitians, Customizable Educational Poster, Table Tent Display and Marketing Guidance for Promoting Antibiotic Stewardship.

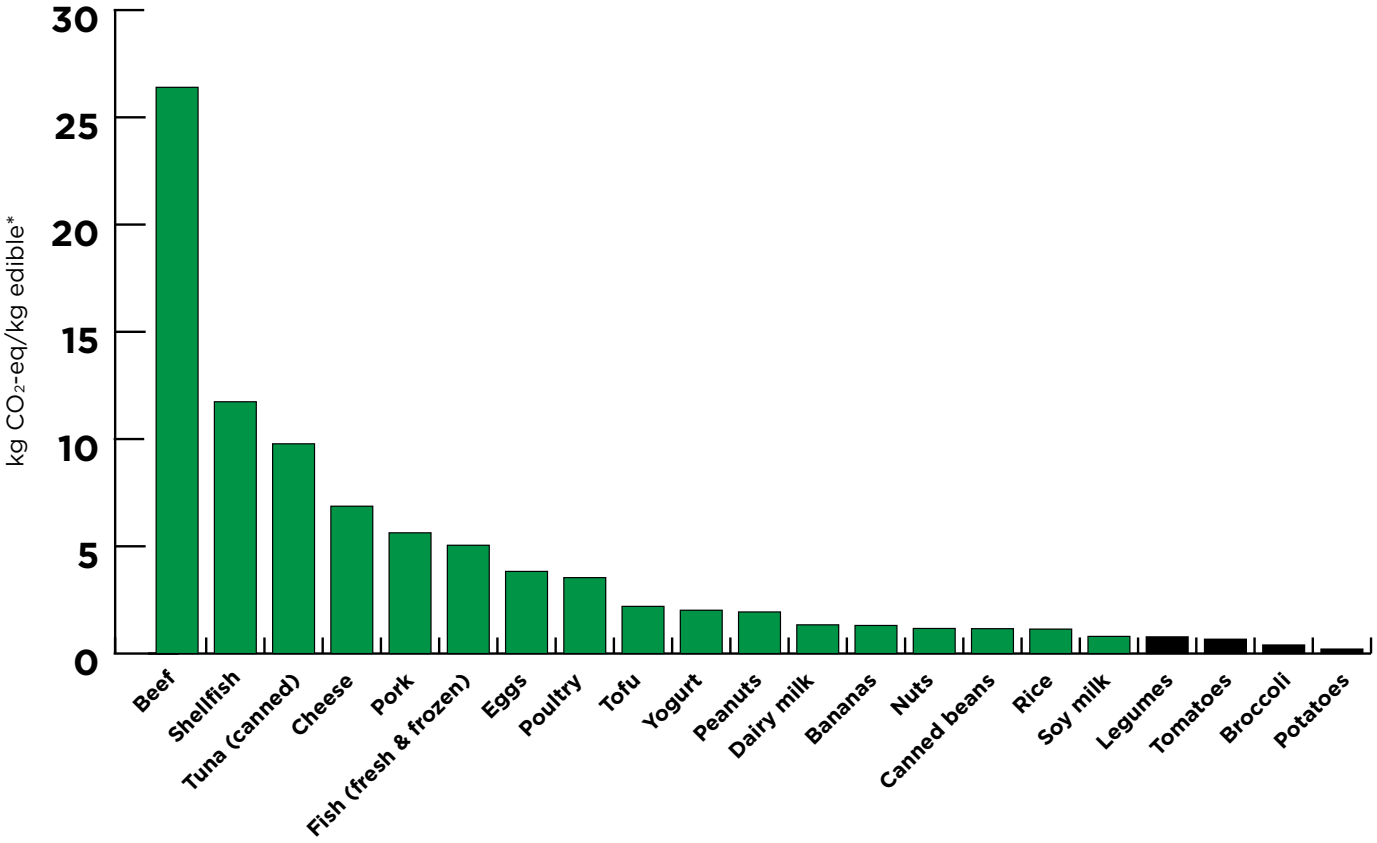
- The Humane Society of the U.S. works with a range of institutions to promote delicious, healthy, plant-based meals. The organization offers comprehensive plant-based culinary trainings. Its Forward Food website features toolkits for plant-based food programs as well as plant-based recipes for institutions. It also provides useful a Meatless Monday toolkit. Contact: meatlessmonday@humanesociety.org
- Meatless Monday provides a wide array of useful resources and recipes for organizations and municipalities that want to participate in Meatless Mondays.
- IntoFood provides technical assistance and a fee-based software that conducts sustainability data analysis of recipes and food purchasing activities. It analyzes the embedded carbon emissions of all major food items, identifies which food categories emit the most GHGs and maps trends over time to demonstrate the overall carbon footprint of a food service operation, including the impacts of animal products compared with plant-based foods.
- Chef Ann Foundation provides recipes and support for K-12 schools that want to implement healthier, plant forward menus. Friends of the Earth has compiled a list of their low-meat recipes and other low-meat recipes.

Additional resources

- The Food Service Guidelines Collaborative (FSGC) is a multidisciplinary group of health, nutrition, environment and consumer advocacy NGOs and government staff from the local, state and federal level. The group works throughout the food system to support the implementation of the *Federal Food Service Guidelines* by sharing and tracking best practices and model policy with the aim of leveraging institutional food service purchases to support eating patterns that are aligned with the *Dietary Guidelines for Americans*. This group seeks to promote healthy diets that are part of a food system that conserves and renews natural resources, advances social justice and animal welfare, builds community wealth and fulfills the food and nutrition needs of all eaters now and into the future. Any municipality or organization interested in working on food procurement that aligns with these objectives is welcomed to join.
- Menus of Change is at the forefront of supporting chefs in shifting toward menus that support human and environmental health. In addition to its principles for food service, the initiative also provides insights on delicious ways to reduce meat servings and change consumer behaviors and attitudes.
- Real Food Challenge provides numerous resources that are helpful for food service professionals, including guides related to sustainable food purchasing on university campuses.
- The Plant Based Foods Association is a trade association representing more than 90 of the nation's leading plant-based food companies, advocating for a level playing field, and working to expand markets for this fast-growing sector of the food industry. PBFA offers an online directory of high-quality sources of plant-based foods and ingredients.

APPENDIX E

Greenhouse gas emissions of select foods by weight



Greenhouse Gas Emissions of Select Foods

(kg CO_2-eq/kg edible*)

Beef	26.4	**Eggs**	3.5	**Canned beans**	1.2
Shellfish (shrimp)	11.7	**Tofu**	2.2	**Rice**	1.1
Cheese	9.8	**Yogurt**	2.0	**Soy milk**	0.8
Pork	6.9	**Peanuts**	1.9	**Legumes**	0.8
Tuna (canned)	5.6	**Dairy milk**	1.3	**Tomatoes**	0.7
Poultry	5.1	**Bananas**	1.3	**Broccoli**	0.4
Fish (fresh & frozen)	3.8	**Nuts**	1.2	**Potatoes**	0.2

*Data are based on global average emissions from production to retail

Source: Heller, M. C. and Keoleian, G. A. (2015), Greenhouse Gas Emission Estimates of U.S. Dietary Choices and Food Loss. *Journal of Industrial Ecology, 19*: 391–401. doi:10.1111/jiec.12174_, Supporting Information (3)

APPENDIX F

Good Food Purchasing Program Environmental Sustainability Standards

ENVIRONMENTAL SUSTAINABILITY

Source from producers that employ sustainable production systems to reduce or eliminate synthetic pesticides and fertilizers; avoid the use of hormones, routine antibiotics and genetic engineering; conserve and regenerate soil and water; protect and enhance wildlife habitats and biodiversity; and reduce on-farm energy and water consumption, food waste and greenhouse gas emissions. Reduce menu items that have high carbon and water footprints, using strategies such as plant forward menus, which feature smaller portions of animal proteins in a supporting role.

ENVIRONMENTAL SUSTAINABILITY

PURCHASING GOALS

STRATEGIES

- INCREASE ENVIRONMENTALLY SUSTAINABLE FOOD SPEND **OR**
- REDUCE CARBON AND WATER FOOTPRINT

SOURCING TARGETS, BY YEAR

	TARGET: YEAR 1	TARGET: YEAR 5	POINTS AWARDED
LEVEL 1 BASELINE	**Option 1: Increase Environmentally Sustainable Food Spend** 15% of the total dollars spent annually on food products, with a goal of increasing at least 2% per year, will come from Level 1 environmentally sustainable sources (see page 29 for qualifying criteria). OR 5% of the total dollars spent annually on food products, with a goal of increasing at least 2% per year, will come from Level 3 environmentally sustainable sources (see page 29 for qualifying criteria). **Option 2: Reduce Carbon and Water Footprint** a) Reduce carbon footprint[9] and water footprint[10] of meat, poultry, and cheese purchases by at least 4% per meal served from baseline year, with an 8% reduction goal within two years, and a 20% reduction goal within five years;[11,12] AND b) Perform a food waste audit that identifies specific types and quantities of food in waste stream (see Food Loss and Waste Protocol for guidance) and implement at least two source reduction strategies[13] that address most wasted food items identified in audit. (See Appendix B for a menu of options).[14] **Option 3: Submit Plan for Baseline Achievement Within 1 Year:** If vendor and/or suppliers do not have current capacity to meet environmentally sustainable food purchasing goals, the vendor may submit a plan to achieve full compliance at least at the baseline level by end of year one.	**Option 1: Increase Environmentally Sustainable Food Spend** 25% of the total dollars spent annually on food products will come from Level 1 environmentally sustainable sources by fifth year of participation in the Good Food Purchasing Program (see page 29 for qualifying criteria). **Option 2: Reduce Carbon and Water Footprint** a) Reduce carbon and water footprint of meat, poultry, and cheese purchases by at least 20% per meal served from baseline year; AND b) Perform a food waste audit that identifies specific types and quantities of food in waste stream (see Food Loss and Waste Protocol for guidance) and implement at least three source reduction strategies that address most wasted food items identified in audit. (See Appendix B for a menu of options).	**1**

ADDITIONAL LEVEL 1 REQUIREMENTS CONTINUED ON PAGE 25

To be recognized as a Good Food Provider, an institution at least meets the baseline standard in the Environmental Sustainability Category.

9 See next page for conversion factors for carbon footprint.
10 See next page for conversion factors for water footprint.
11 The baseline year is the year in which institution initiates its meat reduction efforts.
12 Special calculations of water/carbon for "better meat" will be considered in cases where a credible analysis has been conducted to evaluate the carbon emissions associated with the production of that particular meat source.
13 Qualifying food resource recovery strategies will be determined based on adherence to EPA's Food Recovery Hierarchy. See Appendix B for menu of options.
14 An institution may choose to conduct waste audit at a select number of sample sites.

ENVIRONMENTAL SUSTAINABILITY
PURCHASING GOALS, CONT.

STRATEGIES

- INCREASE ENVIRONMENTALLY SUSTAINABLE FOOD SPEND **OR**
- REDUCE CARBON AND WATER FOOTPRINT

SOURCING TARGETS, BY YEAR

	TARGET: YEAR 1	TARGET: YEAR 5
LEVEL 1 BASELINE	**ADDITIONAL LEVEL 1 REQUIREMENTS**	
	No seafood purchased should be listed as "Avoid" in the Monterey Bay Aquarium's most recent Seafood Watch Guide.	No seafood purchased should be listed as "Avoid" in the Monterey Bay Aquarium's most recent Seafood Watch Guide.
	At least 25% of animal products[15] are produced without the routine use of medically important antimicrobial drugs for disease prevention purposes.[16, 17]	At least 50% of animal products are produced without the routine use of medically important antimicrobial drugs for disease prevention purposes.[18]

To be recognized as a Good Food Provider, an institution at least meets the baseline standard in the Environmental Sustainability Category.

CONVERSION FACTORS FOR CARBON FOOTPRINT:

Food Product	lb CO2/lb edible
Beef	26.5
Cheese	9.8
Pork	6.9
Poultry	5.1
Fish	3.8
Other Dairy + Eggs	3.3

Source: Heller, M. C. and Keoleian, G. A. (2016). Greenhouse Gas Emission Estimates of U.S. Dietary Choices and Food Loss. Journal of Industrial Ecology, 19: 391-401.

CONVERSION FACTORS FOR WATER FOOTPRINT:

Food Product	Blue + Green gallons/lb edible
Beef	1,590
Pork	475
Cheese	382
Poultry	230
Other Dairy + Eggs	139
Fish	Pending

Source: Mekonnen, M.M. and Hoekstra, A.Y. (2012) A global assessment of the water footprint of farm animal products. Ecosystems, 15(3): 401-415.

15. Animal product refers to any products derived from an animal, including meat, poultry, eggs and dairy.
16. In qualifying products, medically important antimicrobial drugs (i.e. those in the same class of antibiotics used in human medicine) may be used for non-routine disease control and treatment purposes only. Antimicrobial use must be third party verified (e.g., Certified Responsible Antibiotic Use (CRAU) chicken, Antimicrobial Stewardship Standards for Pork and Chicken (once 3rd party verified)). Disease control is defined here as the use of antibiotics on an animal that is not sick but where it can be shown that a particular disease or infection is present on the premises at the barn, house, pen, or other level at which the animal is kept. The Center for Good Food Purchasing may consider approval of additional narrowly defined, non-customary uses upon request.
17. Addressing antibiotic usage through third party verified certification processes, such as Certified Responsible Antibiotic Use (CRAU) is a separate requirement included in the Environmental Sustainability category. Certification labels that only address responsible antibiotic use are not included as qualifying certifications for environmentally sustainable sources because these labels do not necessarily lead to improved environmental outcomes.
18. See footnote 16 for definition.

ENVIRONMENTAL SUSTAINABILITY

PURCHASING GOALS, CONT.

STRATEGIES

- INCREASE ENVIRONMENTALLY SUSTAINABLE FOOD SPEND **OR**
- REDUCE CARBON AND WATER FOOTPRINT

SOURCING TARGETS, BY YEAR

	TARGET: YEAR 1	TARGET: YEAR 5	POINTS AWARDED
LEVEL 2	**Option 1: Increase Environmentally Sustainable Food Spend** 15% of the total dollars spent annually on food products, with a goal of increasing at least 2% per year, will come from Level 2 environmentally sustainable sources (see page 29 for qualifying criteria). OR 10% of the total dollars spent annually on food products, with a goal of increasing at least 2% per year, will come from Level 3 environmentally sustainable sources (see page 29 for qualifying sources).	**Option 1: Increase Environmentally Sustainable Food Spend** 25% of the total dollars spent annually on food products will come from Level 1 environmentally sustainable sources by fifth year of participation (see page 29 for qualifying criteria).	**2**
	Option 2: Reduce Carbon and Water Footprint a) Reduce carbon and water footprint of meat, poultry, and cheese purchases by 5% per meal served from baseline year, with a 10% reduction goal within two years, a 15% reduction in three years and 25% reduction within five years;[19] AND b) Perform a food waste audit that identifies specific types and quantities of food in waste stream (see Food Loss and Waste Protocol for guidance), and implement at least three source reduction strategies[20] that address most wasted food items identified in audit and donate all recoverable food once per month.[21]	**Option 2: Reduce Carbon and Water Footprint** a) Reduce carbon and water footprint of meat, poultry, and cheese purchases by at least 20% per meal served from baseline year; AND b) Perform a food waste audit that identifies specific types and quantities of food in waste stream (see Food Loss and Waste Protocol for guidance) and implement at least three source reduction strategies that address most wasted food items identified in audit. (See Appendix B for a menu of options).	
	LEVEL 2 ADDITIONAL REQUIREMENTS At least 25% of seafood purchased should be listed as "Best Choice" and no seafood purchased listed as "Avoid" in the Monterey Bay Aquarium's most recent Seafood Watch Guide. At least 30% of animal products are produced without the use of antimicrobial drugs for disease prevention purposes.[22] [23]	At least 50% of seafood purchased should be listed as "Best Choice" and no seafood purchased listed as "Avoid" in the Monterey Bay Aquarium's most recent Seafood Watch Guide. At least 60% of animal products are produced without the use of antimicrobial drugs for disease prevention purposes.[24]	

19 The baseline year is the year in which institution intends to meet reduction of 5%.
20 Qualifying food resource recovery strategies will be determined based adherence to EPA's Food Recovery Hierarchy. See Appendix B for menu of options.
21 An institution may choose to conduct waste audit at a select number of sample sites.
22 In qualifying products, antimicrobial drugs (both medically important and otherwise) may be used for disease control and treatment purposes only. Antimicrobial use must be third party verified (e.g., Certified Responsible Antibiotic Use (CRAU) chicken, Antimicrobial Stewardship Standards for Pork and Chicken (once 3rd party verified)). Disease control is defined here as the use of antibiotics on an animal that is not sick but where it can be shown that a particular disease or infection is present on the premises at the barn, house, pen, or other level at which the animal is kept. The Center for Good Food Purchasing may consider approval of additional narrowly defined, non-customary uses upon request.
23 Addressing antibiotic usage through third party verified certification programs, such as Certified Responsible Antibiotic Use (CRAU) is a separate requirement included in the Environmental Sustainability category. Certification labels that only address responsible antibiotic use are not included as qualifying certifications for environmentally sustainable sources because these labels do not necessarily lead to improved environmental outcomes.
24 Refer to footnote 22 for definition.

ENVIRONMENTAL SUSTAINABILITY
PURCHASING GOALS, CONT.

STRATEGIES

- INCREASE ENVIRONMENTALLY SUSTAINABLE FOOD SPEND **OR**
- REDUCE CARBON AND WATER FOOTPRINT

SOURCING TARGETS, BY YEAR

	TARGET: YEAR 1	TARGET: YEAR 5	POINTS AWARDED
LEVEL 3	15% of the total dollars spent annually on food products, with a goal of increasing at least 2% per year, will come from Level 3 environmentally sustainable sources (see page 29 for qualifying criteria); AND Reduce carbon and water footprint of meat, poultry, and cheese purchases by 6% per meal served from baseline year, with a 12% reduction goal within two years and 30% reduction within five years;[26] AND Perform a food waste audit that identifies specific types and quantities of food in waste stream (see Food Loss and Waste Protocol for guidance), and implement at least three source reduction strategies[26] that address most wasted food items identified in audit, donate recoverable food twice per month, and implement one food recycling strategy (e.g. anaerobic digestion or composting).[27]	25% of the total dollars spent annually on food products will come from Level 3 environmentally sustainable sources by fifth year of participation; AND Reduce carbon and water footprint of meat, poultry, and cheese purchases, per meal served by 30% from baseline year; AND Perform a food waste audit that identifies specific types and quantities of food in waste stream (see Food Loss and Waste Protocol for guidance), and implement at least four source reduction strategies that address most wasted food items identified in audit, donate recoverable food once per week, and implement two food recycling strategies.	**3**
LEVEL 3 ADDITIONAL REQUIREMENTS	At least 50% of seafood purchased should be listed as "Best Choice" and no seafood purchased listed as "Avoid" in the Monterey Bay Aquarium's most recent Seafood Watch Guide. At least 50% of animal products are produced without the use of antimicrobial drugs for disease prevention purposes.[28, 29]	All seafood purchased should be listed as "Best Choice" in the Monterey Bay Aquarium's most recent Seafood Watch Guide. All animal products are produced without the use of antimicrobial drugs for disease prevention purposes.[30]	

26 The baseline year is the year in which institution initiates its meat reduction efforts
26 Qualifying food resource recovery strategies will be determined based on adherence to EPA's Food Recovery Hierarchy. See Appendix B for menu of options.
27 An institution may choose to conduct waste audit at a select number of sample sites.
28 Refer to footnote 22.
29 Addressing antibiotic usage through third party verified certification processes, such as Certified Responsible Antibiotic Use (CRAU) is a separate requirement included in the Environmental Sustainability category. Certification labels that only address responsible antibiotic use are not included as qualifying certifications for environmentally sustainable sources because these labels do not necessarily lead to improved environmental outcomes.
30 Refer to footnote 22.

ENVIRONMENTAL SUSTAINABILITY
EXTRA POINTS

EXTRA POINTS

In addition to base points earned in each category, extra points may be earned in each category for institutional policies or purchasing practices that go above and beyond the standards in each value category.

1	Institution participates in "Meatless Mondays" campaign or any equivalent meatless day program.
1	100% of disposable flatware, dishes, cups, napkins and other service items are compostable.
1	No bottled water is sold or served, and plain or filtered tap water in reusable jugs, bottles or dispensers is available.

ENVIRONMENTAL SUSTAINABILITY
QUALIFYING CRITERIA

	LEVEL 1	LEVEL 2	LEVEL 3
FRUITS & VEGETABLES	• Distributor provides grower signed affidavit verifying that produce has been grown without the use of pesticides listed as prohibited for fresh produce by Whole Foods' Responsibly Grown program and all neonicotinoids and affidavit is accompanied by a site visit from institution or community partner; or Gold certified under ANSI/LEO-4000 the American National Standard for Sustainable Agriculture by Leonardo Academy.	• Protected Harvest certified; or • Food Alliance certified; or • Rain Forest Alliance certified; or • Enrolled in Whole Foods Responsibly Grown program; or • Platinum certified under ANSI/LEO-4000 the American National Standard for Sustainable Agriculture by Leonardo Academy; or • USDA Transitional Organic Standard; or • Sustainably Grown certified; or • Salmon Safe; or • LEAF (Linking Environment and Farming)	• USDA Organic; or • Demeter Certified Biodynamic; or • Produce grown in a farm or garden at the institution using organic practices
MILK & DAIRY	• AGA Grassfed	• Animal Welfare Approved; or • Food Alliance Certified	• USDA Organic
POULTRY		• Animal Welfare Approved; or • Food Alliance Certified	• USDA Organic
EGGS	• Certified Humane Raised and Handled	• Animal Welfare Approved; or • Food Alliance Certified	• USDA Organic
MEAT	• AGA Grassfed	• Animal Welfare Approved; or • Food Alliance Certified; or • Grasslands Alliance Standard	• USDA Organic
FISH (WILD)	• No seafood purchased listed as "Avoid" in the Monterey Bay Aquarium's Seafood Watch Guide	• Fish listed as "Best" choice in Monterey Bay Aquarium's Seafood Watch Guide	• Marine Stewardship Council certified, paired with the MSC Chain of Custody Certification
FISH (FARM-RAISED)	• No seafood purchased listed as "Avoid" in the Monterey Bay Aquarium's Seafood Watch Guide	• Fish listed as "Best" choice in Monterey Bay Aquarium's Seafood Watch Guide[31]	
GRAINS	• Pesticide-free	• Food Alliance Certified	• USDA Organic; or • Demeter Certified Biodynamic
THIRD-PARTY CERTIFICATIONS			

[31] Different criteria for farm-raised fish may be accepted on a species-by-species basis, if endorsed by Seafood Watch

APPENDIX F2
Gavin Newsom's Sustainablity Letter

Office of the Mayor
City & County of San Francisco

Gavin Newsom

Executive Directive 09-03

Healthy and Sustainable Food for San Francisco

July 9, 2009

By virtue of the power and authority vested in me by Section 3.100 of the San Francisco Charter to provide administration and oversight of all departments and governmental units in the executive branch of the City and County of San Francisco, I do hereby issue this Executive Directive to become effective immediately:

1. **The City declares its commitment to increasing the amount of healthy and sustainable food.**

   Access to safe, nutritious, and culturally acceptable food is a basic human right and is essential to both human health and ecological sustainability. The City and County of San Francisco recognizes that hunger, food insecurity, and poor nutrition are pressing health issues that require immediate action. Further we recognize that sustainable agricultural ecosystems serve long-term economic prosperity and ability of future generations to be food self-sufficient. In our vision, sustainable food systems ensure nutritious food for all people, shorten the distance between food consumers and producers, protect workers health and welfare, minimize environment impacts, and strengthen connections between urban and rural communities. The long-term provision of sufficient nutritious, affordable, culturally appropriate, and delicious food for all San Franciscans requires the City to consider the food production, distribution, consumption and recycling system holistically and to take actions to preserve and promote the health of the food system. This includes setting a high standard for food quality and ensuring city funds are spent in a manner consistent with our social, environmental and economic values.

2. **The following principles guide this Directive on Healthy and Sustainable Food:**

   a. To ensure quality of life, as well as environmental and economic health in San Francisco, the food system must promote public health, environmental sustainability and social responsibility.

   b. Eliminating hunger and ensuring access to healthy and nutritious food for all residents, regardless of economic means, is a concern of all city departments. Investments should be allocated to ensure no San Franciscan goes hungry.

   c. San Francisco's neighborhood food environments must allow residents the opportunity to make healthy food choices and reduce environmental causes of diet related illnesses.

   d. To reduce the environmental impacts associated with food production, distribution, consumption, and disposal, whenever possible, city resources will be used to purchase and promote regionally produced and sustainably certified food.

1 Dr. Carlton B. Goodlett Place, Room 200, San Francisco, California 94102-4641
gavin.newsom@sfgov.org • (415) 554-6141

APPENDIX F3
San Diego County's Eat Well Practices

As described on page 31 of the guide, San Diego County enacted the Eat Well Practices, comprehensive health and sustainable food guidance that includes climate-friendly food recommendations. Below are some excerpts from the standards.

I. Guidance for Congregate/Custodial Meal Programs

SUSTAINABILITY

- Prioritize local products, including produce, meat, poultry, eggs, dairy, and seafood as California grown, raised, or caught with a focus on products coming from San Diego County and the Region.
- Encourage the development of on-site gardens for culinary purposes, where applicable
- Prioritize organic and sustainable products.
- Prioritize plant-based foods, including protein and dairy alternatives; offer plant-based foods and dishes and vegetarian meals.
- When seafood is offered, consider seeking out opportunities to use product procured from responsibly managed, sustainable, healthy fisheries.
- Prioritize food and beverage products with no or minimal packaging.
- Prioritize reusable food and beverage serviceware (e.g., cups, plates, silverware) whenever feasible and appropriate.
- Promote clean, tap or filtered water and reusable containers over bottled water.
- Consider developing and implementing a food donation plan, where applicable.

PRODUCT PLACEMENT

- Place plant-based options and other healthy options at the front of service line or other highly visible locations.

II. Guidance for Cafeterias/Cafés

ANIMAL & PLANT-BASED PROTEIN:

- Consider offering a diverse variety of protein foods, such as seafood (e.g., fish and shellfish), lean meats and poultry, eggs, legumes (e.g., beans and peas), and nuts, seeds, and soy products, daily.
- Consider offering protein foods from plants such as legumes (beans and peas), and nuts, seeds, and soy products.
- Consider offering a vegetarian entrée option when more than one entrée option is provided.
- Consider offering alternatives to red meat and avoid processed meats (e.g., hot dogs, bacon, sausage, deli meats); if offered, serve infrequently and in small portions.
- Consider offering seafood (e.g., fish and shellfish) as frequently as possible.
- Consider purchasing meats and poultry raised without the routine use of antibiotics and/or growth hormones.

DAIRY AND PLANT-BASED ALTERNATIVES:

- If yogurt is offered, prioritize offering yogurts with no added sweeteners (and offer fresh fruit).

SUSTAINABILITY

- Prioritize local products; strive to offer local produce, meat, poultry, eggs, dairy, and seafood that is California grown, raised, or caught with a focus on foods coming from San Diego County and the Region.
- Prioritize organic and sustainable products.
- Prioritize plant-based foods, including proteins and dairy alternatives; offer protein foods from plants such as legumes, nuts, seeds, and soy (i.e., a vegetarian entrée), daily.
- When seafood is offered, provide product procured from responsibly managed, sustainable, healthy fisheries.
- Prioritize food and beverage products with no or minimal packaging.
- Consider offering reusable serviceware for food and beverage purchased for onsite consumption whenever feasible and appropriate; promote and incentivize the use of reusable containers for beverages and foods purchased for offsite consumption.
- Strive to minimize non-reusable, single-use beverage containers.
- Consider developing and implementing a food donation plan.

PRODUCT PLACEMENT

- When feasible, place plant-based options at the front of service line or other highly visible locations; place first on menus.
- When feasible, place in highest selling or other prominent positions unprocessed and minimally processed foods and beverages.
- When feasible, display foods and beverage options that meet the unprocessed, minimally processed, and moderately processed categories within three feet of register; place fruit within reach of register, when possible.

APPENDIX F4

Healthy People | Healthy Planet: City of Portland food purchasing guidelines

The Healthy People, Healthy Planet food purchasing guidelines were developed to encourage City of Portland employees to make healthy and sustainable choices when using public dollars for City-sponsored meetings, trainings, and events. The guidelines meet sustainability goals, particularly those outlined in the City's Climate Action Plan, promote equity, and support personal and environmental health.

Food choice is a key factor in addressing sustainability and reducing carbon emissions. From a carbon perspective the type of food we choose is a more significant factor than where it comes from. In particular, meat, dairy, and processed foods have a higher carbon footprint than plant-based proteins made from beans, nuts, and soy. Lower-carbon foods are also better for our health.

Sustainable food purchases also provide opportunities to address social equity. These guidelines support local and emerging businesses, particularly those owned by women and entrepreneurs of color.

Guiding Principles

- Reduce the negative environmental and climate impacts of catering by addressing food type and sustainability principles.
- Support catering businesses that are local, sustainable, emerging, and owned by women and entrepreneurs of color.
- Encourage and model healthful food choices at City-sponsored meetings and events to improve community wellbeing.

Food Choices

- Emphasize plant-based meals that minimize or eliminate meat and dairy offerings.
- Include locally grown, seasonal, and organic ingredients when possible.
- Offer vegetables, fruit, and whole grains, and avoid processed foods with salt, added sugars, and fats.
- Provide options for those with dietary restrictions.

Social Equity

- Support emerging businesses and neighborhood vendors owned by women and entrepreneurs of color.
- Prioritize culturally appropriate food.

Sustainability Measures

- Order the right amount of food to prevent leftovers.
- Serve smaller portions to prevent food waste, such as cutting sandwiches, pizza, and pastries into smaller portions.
- Offer bite-sized foods that don't require dishes or silverware.
- Use durable dishware when possible.
- Provide pitchers of water instead of bottled beverages.
- If using disposable products, use those that contain recycled content.
- Order coffee from vendors using reusable carafes, bulk containers for condiments and creamers, and, if possible, ask attendees to bring their own mug.
- Offer coffee and tea that is socially and environmentally responsible.
- Prefer caterers that use low-impact delivery systems such as bike delivery.

Applying the Guidelines

The food purchasing guidelines were created to make healthy and sustainable choices easier. A preferred provider list has been created to assist city employees with implementing the guidelines.

Choosing Vendors

Preferred City food vendors have been certified by the Bureau of Planning and Sustainability's Sustainability at Work program. In addition, the vendor list also includes a paragraph about each business that provides additional background, highlights their sustainability measures, and alignment with the City's food choice guidelines.

Tracking

To assess compliance with the purchasing guidelines, City food purchases will be tracked as part of a 9-month pilot initiative. In order to improve the data, please be sure to use the correct GL number, 539100, when using a p-card. And when the invoice is entered into Works, be sure to fill out the comment field with a description of the event and the type of food that was served.

APPENDIX F5

An RFP template for sustainable food services from the federal government

The federal government's General Services Administration created this RFP Template for Sustainable Food Services for federal buyers to secure green contracts for cafeteria and food services. The following is an excerpt from the section entitled "Sustainability Program and Practices," beginning on page 19 of the RFP template.

i. Background

The federal government recognizes the importance of promoting sustainable systems that protect our people, our planet, and our economic vitality. The commitment to sustainability goals is demonstrated in the following executive orders, USDA legislation, and USDA initiatives. These are a basis for the sustainability elements of these guidelines:

1) Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management," directs agencies within the federal government to practice environmentally, economically, and fiscally sound, integrated, continuously improving, efficient, and sustainable methods of operation.

2) Executive Order 13514, "Federal Leadership in Environmental, Energy, and Economic Performance," provides the following general guidance for federal agencies:

   - Increase energy efficiency; measure, report, and reduce greenhouse gas emissions from direct and indirect activities.
   - Conserve and protect water resources through efficiency, reuse, and storm water management.
   - Eliminate waste, recycle, and prevent pollution.
   - Leverage Agency acquisitions to foster markets for sustainable technologies and environmentally preferable materials, products, and services.
   - Design, construct, maintain, and operate high performance sustainable buildings in sustainable locations.
   - Strengthen the vitality and livability of the communities in which federal facilities are located.
   - Inform federal employees about and involve them in the achievement of these goals.

3) USDA defines sustainable agriculture as Congress defined the term in 1990 (7 USC 3103), as an integrated system of plant and animal production practices having a site-specific application that will over the long-term accomplish the following:

   - Satisfy human food and fiber needs.
   - Enhance environmental quality and the natural resource base upon which the agriculture economy depends.
   - Make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls.
   - Sustain the economic viability of farm operations.
   - Enhance the quality of life for farmers and society as a whole.

4) USDA encourages stronger connections between farmers and consumers, and support for local and regional food systems as a way to foster economic opportunity for farmers and ranchers, stimulate community economic development, expand access to affordable fresh and local food, cultivate healthy eating habits and educated, empowered consumers, and demonstrate the connection between food, agriculture, community, and the environment (see http://www.usda.gov/knowyourfarmer for more information).

It is encouraged that the Contractor employ these practices in their daily operation of the cafeteria and demonstrates their corporate capability by applying these standards.

ii. Sustainability Standards

1. General Operations
    a. Standard Criteria:
        i. Participate in waste reduction, recycling and composting programs, as available.
        ii. Promote and incentivize the use of reusable beverage containers.
        iii. Promote use of tap water over bottled water.
        iv. Use green cleaning practices.
        v. Use integrated pest management practices and green pest control alternatives to the maximum extent feasible.
        vi. Provide materials for single-service items (e.g., trays, flatware, plates, and bowls) that are compostable and made from bio-based products.

2. General Food
    a. Standard Criteria:
        i. Offer 25% of the product line to be organically, locally, or documented sustainably grown (e.g., integrated pest management, pesticide free, other labeling programs).
        ii. Offer seasonal varieties of fruits and vegetables.
    b. Above Standards:
        i. Offer 35% of the product line to be organically or locally or documented sustainably grown (e.g., integrated pest management, pesticide free, other labeling programs).

3. Sustainability Labeling
    a. Standard Criteria:
        i. Label Organic, local, or documented sustainably grown food items available in food service at the point of choice.
    b. Above Standard:
        i. Educate about the value of agricultural best practices that are ecologically sound, economically viable, and socially responsible in Agency concessions services with signage, informational programs, or other means of communicating the benefits of the items that are labeled organic, local, and/or sustainable.
        ii. For locally grown foods, include information that identifies the farms and sustainable practices used.

4. Animal Products
    a. Standard Criteria:
        i. Offer fish/seafood that has been responsibly harvested. http://www.fishwatch.gov
    b. Above Standard:
        i. Offer Certified Organic or documented sustainably or locally produced milk and milk products.
        ii. Offer Certified Organic or documented sustainably or locally produced eggs and meat (e.g., grass fed, free-range, pasture raised, grass finished, humanely raised and handled).

5. Beverages
    a. Standard Criteria:
        i. Offer drinking water, preferably chilled tap.
    b. Above Standard: 21
        i. If offering coffee or tea, include coffee or tea offerings that are Certified Organic, shade grown, and/or bird friendly.
        ii. If composting is available, bottled water must be offered in compostable bottles.

It is encouraged that the Contractor employ these practices in their daily operation of the cafeteria and demonstrates their corporate capability by applying these standards.

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