GOOD FOOD, WITHIN REACH:

Food system transformation to mitigate climate change, support ecosystem health, and advance social justice
ACKNOWLEDGMENTS:
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EXECUTIVE SUMMARY

GOOD FOOD, WITHIN REACH:
A PROPOSED SIERRA CLUB NATIONAL FOOD AND AGRICULTURE CAMPAIGN

Agriculture has been a legacy area of work for the Sierra Club for decades, from litigating the egregious practices of agribusiness, to fighting destructive ranching on public lands and concentrated animal feeding operations. Today, there is an opportunity to join with others to advance agriculture and food systems work that serves our climate, movement building, and equity goals.

Guided by the organization’s new food and agriculture policy, a national Sierra Club engagement at this time has the potential to significantly influence a shift to a food system that mitigates the worst climate change, successfully stewards our resources, and underpins vibrant regional economies and healthy communities. Food, like air and water, is fundamental for humans to thrive. Sierra Club’s unique ability to bridge the local and national through its combination of policy influence, grassroots reach in every part of the country, legal expertise, and digital and communications savvy, provides a strong foundation for a successful campaign. In addition, Sierra Club staff and volunteers are overwhelmingly supportive (87%) of a new national agriculture and food campaign, and are poised to leverage strong interest and expertise that currently exists in well over half of the chapters around the country.

This is a ripe political moment to launch a new food and agriculture effort. The plight of rural America that was underlined in the wake of November’s federal election is intimately tied to a system of increasing agribusiness consolidation that undermines the agricultural economy, degrades the environment, and affects communities’ health. While farmers’ support for Trump was influential in the election’s outcome, early actions by the President suggest that he will serve the limited interests of corporate agribusiness rather than adopting policies that would build a genuinely strong and just rural America. At the consumer end, basic access to healthy food is threatened, from potential changes to the Supplemental Nutrition Assistance Program to deeper barriers that prevent people’s participation in, and control over, their food.

The food and agriculture campaign will allow Sierra Club to engage rural communities in a meaningful way and build power in these parts of the country—not just among farmers but socially disadvantaged farmers; farm workers exposed to toxic chemicals, unfair wages, and insecurity; and rural communities drinking contaminated water, breathing polluted air and with poor access to healthy food. This effort can leverage current political conditions to support a broad and unified “good food” movement to work for systemic change that benefits the climate as well as the broader ecological health and social justice that Sierra Club is working for.

Sierra Club holds as a core goal achieving ambitious and just climate solutions. The proposed campaign is a logical next step. Agriculture is a leading edge of the climate movement, particularly as we are already in the dangerous zone of atmospheric CO₂ at over 400 ppm and emissions reduction alone is not enough to get us back below 350 ppm. The agriculture sector is a significant contributor to emissions, accounting for 9% of all domestic emissions (including being the leading emitter of the potent gases methane and nitrous oxide), but agriculture and forests also have the theoretical potential to draw down 144 to 423 Tg C/year in the U.S. alone, equivalent to shutting down 154-451 coal fired power plants. Implementing a scenario of reasonable
scaling up of conservation practices in agriculture, it is estimated that 75 Tg C/year could realistically be achieved (including sequestration and emissions reduction), enough to offset half of the entire greenhouse gas footprint of U.S. agriculture (equivalent to taking 80 coal-fired power plants offline or taking 58 million passenger vehicles off the road).

Food and agriculture is a complex system that involves many interconnected problems. These include socio-economic issues such as the erosion of food sovereignty, an epidemic of diet-related diseases, job loss, poverty and food insecurity, and food waste. The food system is also linked to myriad environmental problems, including climate change, contaminated air and water, honey bee colony collapse and loss of native pollinators, GMO contamination of organic and conventional crops and emergence of resistant pests and weeds, loss of biodiversity, and degraded and depleted soils). Keeping a primary focus on climate, the campaign will tackle the root causes of these multiple crises, in particular the consolidation of control and influence by an ever-smaller number of agribusiness companies.

SIERRA CLUB FOOD AND CLIMATE CAMPAIGN

Our vision is to make American agriculture a solution to the climate crisis rather than a cause. It includes four interconnected work areas, described below, that together apply the best of Sierra Club’s unique strengths to bear on the issues. These include a combination of policy advocacy, supply chain interventions, and grassroots mobilizing and movement building to achieve the following key outcomes:

- Americans consume less meat & dairy, raised by more ranchers using best practices
  - Lamb, beef, pork, and cheese have the highest carbon footprint and Americans eat double the recommended amount of protein from these sources
  - Large concentrated animal feeding operations (CAFOs) undermine healthy rural economies and pollute air and water
  - Addressing CAFOs and destructive grazing practices can lower the overall impact of animal production

- Producers are supported in shifting to regenerative organic agricultural practices and carbon sequestration
  - These practices sequester carbon and improve climate resilience
  - Reducing farm chemicals limits greenhouse gas emissions and benefits soil health, water quality, air quality, and worker health

- A greater share of food is delivered through thriving regional food economies versus consolidated and centralized supply chains
  - Consolidated agri-business puts upward pressure on the scale and specialization of farm production and undermines food sovereignty and farm profitability

- Food waste in landfills is dramatically reduced, with food being diverted to consumer use where possible and otherwise composted
  - Mitigating food waste can lower emissions, conserve resources, and improve food security
  - Composted non-salvageable food waste can be an important contributor to soil fertility and soil carbon sequestration
AREAS OF WORK

1. BUILD SUSTAINABLE AND JUST MEAT SUPPLY CHAINS.
Engage federal, state, and local administrative policy and legal challenges to combat large-scale concentrated animal agriculture and promote positive alternative supply chains that encourage smaller-scale and more sustainable and humane production.

- Collaborate with chapters on creating roadblocks to concentrated animal agriculture
- Create a targeted federal administrative policy effort for key wins that give farmers and ranchers more support for good practices
- Campaign against consolidation and advocate for supply chains that support low-impact ranching

2. RESTORE THE CARBON CYCLE AND BUILD HEALTHY SOILS.
Build wealth in rural communities through richer soils and incentives for carbon sequestration, and close the food waste loop by diverting food waste from landfills and promoting composting.

- Create equitable federal, state, and local administrative policy incentives for healthy soils, food waste, and composting
- Bring agricultural solutions into climate action frameworks at all levels
- Support urban gardens integrating composting and soil building education, particularly in low-income communities, fostering climate resilience and access to Nature

3. PROMOTE SUSTAINABLE DIETS.
Reduce or eliminate meat in 1 billion meals through climate-savvy food service campaigning and community mobilization.

- Campaign for less meat and other climate commitments in restaurants, institutional foodservice, and public procurement policy
- Produce an engagement framework and toolkit to support communities taking self-defined action on diet + climate
- Communicate creatively about climate + diet

4. RURAL AMERICA DIALOGUES.
Engage dialogue, storytelling, and relationship-building, lifting up the voices of those who steward our climate by working the land to mobilize and inspire decision-makers and the public.

- Build strong alliances with sustainable agricultural producers and workers with a particular focus on socially disadvantaged parts of the community and create pathways for the stories of agricultural climate stewards to be told to decision-makers and the public
- Creatively disseminate stories to amplify campaign advocacy efforts

Together, these recommendations endeavor to maintain Sierra Club’s identity and build on the organization’s legacy while responding to a changing world and evolving organizational priorities. They align with established guiding criteria and Sierra Club’s agricultural policies, and are designed to build on the best work Sierra Club is already doing in the field. The proposed national food and agriculture campaign will step into new work sensitively, build strong relationships and trust with potential partners on the frontlines of food and agriculture struggles, and honor place and local knowledge around the country while building a strong national narrative and strategy.

The Sierra Club has long worked to protect and steward the nation’s wild places—this campaign will show Sierra Club’s commitment to also supporting effective stewardship of our cultivated lands while sustainably producing healthy food and fiber for all.
THE LANDSCAPE ANALYSIS

BACKGROUND AND APPROACH

In early 2016, Sierra Club initiated a process to explore how the organization could best effect change through national-level work in food and agriculture. This report presents the findings from a landscape analysis and recommendations for Sierra Club work in this area.

Leaders in the organization asked that recommendations align with organizational goals by prioritizing approaches that address the direct impacts of the United States food and agriculture system on U.S.-derived climate emissions and impact on the domestic environment in the United States. They further requested that recommendations focus on areas of work that most strongly embody the following criteria:

- Greatest climate and environmental impact;
- Advances Sierra Club’s commitment to justice and equity;
- Changes sought are likely to be achieved via activities where Sierra Club can be most effective;
- Greatest potential to build and broaden the environmental movement, complement the work of other organizations, and engage our base;
- Timely midterm opportunities (next 2-5 years) to influence wide ranging administrative policy and create change at a systemic level;
- Alignment with our existing campaigns and programs; and
- High likelihood of funder support.

The landscape analysis and recommendations were informed through a careful process of listening to, and engaging with, people across the Sierra Club and the broader food and agriculture field. The intent of this process was to tap into a wide range of perspectives and knowledge across different parts of the system and inform a path forward for Sierra Club that meets the above criteria.

This set of interviews and meetings combined breadth and depth to understand the broader dynamics playing out across the food and agriculture system, tapping leaders with a bird’s eye view of the system as well as content experts on a range of specific topics. A stakeholder analysis led to inclusion of interviewees, both theoreticians and practitioners, from the following groups: production agriculture (representing a range of operation types and backgrounds), agricultural and food system workers, supply chain, environmental and conservation advocacy, philanthropy, science and academia, climate justice, food sovereignty, social justice, food and agriculture policy, legal strategy, and media and reporting. Topical “deep dive” interviews included agroecology, agricultural carbon sequestration, composting, CAFOs, food security, market structure, land tenure, and community engagement, among other topics considered to warrant further exploration in the early and middle phases of the analysis. A particular emphasis in the landscape analysis was placed on large national environmental organizations in order to help assess the best potential value-add of Sierra Club.

The scope of the landscape analysis, while able to capture a fair degree of representativeness in the system, also required selectivity and inevitably was not able to include all perspectives. If Sierra Club moves forward in launching a new national food and agriculture campaign, there should be ongoing opportunity to shape and inform those efforts through additional engagement.

Interviews were coupled with a literature review and data collection. Following the data collection phase, early ideas that met the guiding criteria were developed, vetted, and refined through a series of workshops and meetings with internal and external leaders. A more detailed outline of these activities is included in the Appendix.
WHY SHOULD SIERRA CLUB INCLUDE FOOD AND AGRICULTURE AS A NATIONAL PRIORITY AT THIS TIME?

IT FITS SQUARELY INTO SIERRA CLUB’S MANDATE.

The U.S. food system has clear overlap with the Sierra Club’s three externally oriented strategic goals:

1. **Achieve ambitious and just climate solutions.** Agriculture contributes substantially to U.S. carbon emissions (9%) and has significant potential to contribute to mitigation of climate change through reduction in emissions as well as carbon sequestration. The broader food system contributes additional emissions. Agriculture represents 83% of the total climate footprint of the food system. Disruptions to global food production as a result of climate change will disproportionately affect the poor, making mitigation essential to reducing suffering. Climate change will impact all aspects of food security, from supply to equity of access. Working for just and ambitious climate solutions can’t leave out the role of agriculture in fighting climate disruption nor in building resilience and climate justice.

2. **Explore, enjoy and protect our nation’s land, waters, air, and wildlife.** In the U.S., agriculture covers about half of the land surface. In 2012 alone, 1.67 billion tons of American topsoil were lost to erosion. Nonpoint source pollution by agriculture is the single largest source of water quality impairment for US rivers and lakes; coastal dead zones increased 30-fold since 1960 and by the turn of the century, 65% of the nation’s estuaries exhibited moderate to high eutrophication. Agriculture is also a significant contributor to air pollution. Wildlife is impacted through a variety of issues such as livestock predator control, farm chemicals, and loss of habitat. Efforts to protect our land, water, air, and wildlife must account for the significant impacts of agriculture, as well as its potential to be an important part of the solution.

3. **Engage and support a broad, diverse, powerful, and inclusive movement.** Food is a great mobilizer and connector. Food and agriculture can engage many people who may not mobilize on other Sierra Club priorities such as the preservation of wild spaces or clean energy. There is real opportunity for Sierra Club food and agriculture work to have a positive message and expand and diversify the organization’s base. The food justice movement is maturing and becoming a more inclusive coalition of labor, environmental, and justice voices. This presents an opportunity for the Sierra Club to both add its voice to, and learn from, the efforts of ally organizations.

THE FOOD AND AGRICULTURE SECTOR OFFERS A POWERFUL OPPORTUNITY TO LOWER NET CARBON EMISSIONS.

Agriculture is the third largest contributor of domestic GHG emissions by sector after fossil fuels and transportation. Accounting for 9% of all domestic emissions, and with substantially greater potential to sequester carbon, agriculture clearly has a role to play in addressing climate disruption.

AGRICULTURAL EMISSIONS

Animal agriculture formally accounts for 42%, and crop agriculture for 58%, of total agricultural emissions in the United States. However, taking into account crops grown for feed, animal agriculture is responsible for about 60% of the total. For example, about half of all soy and 40% of corn goes to animal feed. An additional 40% of corn is used for ethanol production. In terms of short-lived climate pollut-
ants, agriculture is the main source (73%) of all U.S. nitrous oxide emissions, mostly from manure management (13% of the agricultural total) and nitrogen fertilizers applied to agricultural soils (87%). The observed increase in atmospheric nitrous oxide levels since 1940 is largely attributable to an increased reliance on nitrogen-based fertilizers. Agriculture is also responsible for 33% of U.S. methane emissions, mostly from animals (ruminant enteric fermentation is 69% of agricultural burden and animal waste another 26%). Overall, agricultural greenhouse gas emissions are on an upswing, having increased 8% from 1990 levels.

**FIGURE 1: U.S. Greenhouse Gas Emissions From Agricultural Activities, 2014**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Emissions in million metric tons of carbon dioxide equivalents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural soil management</td>
<td>55.5%</td>
</tr>
<tr>
<td>Enteric fermentation</td>
<td>28.6%</td>
</tr>
<tr>
<td>Manure management</td>
<td>13.7%</td>
</tr>
<tr>
<td>Rice cultivation</td>
<td>2.1%</td>
</tr>
</tbody>
</table>


**CARBON SEQUESTRATION IN AGRICULTURE**

Reducing carbon emissions alone is not enough to pull atmospheric carbon dioxide concentrations back from current levels of over 400 ppm to a safe zone of below 350 ppm. The agriculture sector is a significant contributor to emissions, but agriculture and forests also have the theoretical potential to draw down 144 to 423 Tg C/year in the U.S. alone, equivalent to shutting down 154-451 coal fired power plants. Implementing a scenario of reasonable scaling up conservation practices in agriculture, it is estimated that 75 Tg C/year could realistically be achieved (including sequestration and emissions reduction), enough to offset half of the entire greenhouse gas footprint of U.S. agriculture (equivalent to taking 80 coal-fired power plants offline or taking 58 million passenger vehicles off the road).

**CLIMATE IMPACTS OF THE BROADER FOOD SYSTEM**

While agriculture accounts for 15-25% of global emissions (including land use changes), the remainder of the food system (packaging, processing, refrigeration, marketing, home food preparation, and waste) make up 5-10% of global emissions. In the United States, food transport (aka “food miles”) comprises just 11% of the food system’s carbon footprint.

But while the non-agricultural elements of the food system produce relatively few direct climate impacts, the structure of the food system and emissions from agriculture are interrelated. Consolidation in food and agriculture is structurally linked to increased industrialization of agricultural production as well as centralized distribution and long-distance transport, both of which increase GHG emissions (albeit in ways that are harder to quantify). In addition, our food system has become highly dependent on fossil fuels. The food system now accounts for 16% of national energy use and was responsible for 80% of increased energy use nationwide over a 5-year period. In addition, as consumers and producers are separated from each other in these supply chains, people are less able to discern how their food was produced and be able to make informed choices, removing an important feedback loop that limits food system emissions. Lastly, as consolidation increases, the influence of the biggest companies in the system secure greater influence in the policy process which ultimately leads to policies that further their own interests at the expense of the public interest. The structure of the broader food economy warrants attention as part of a broader strategy to address the climate impacts of food and agriculture.

**CLIMATE IMPACTS OF FOOD WASTE**

Food waste is another important lens into the climate impacts of food. A total of 40% of all food in the United States is wasted. 52.4 million tons of food waste is sent to landfills (where it is the largest source of landfill methane emissions) and 10.1 million tons of food is left unharvested. According to the Natural Resources Defense Council, U.S. food waste accounts for 176 MMT CO₂e, or 2.6% of total emissions. ReFED, a national coalition on food waste, proposes a set of achievable actions to reduce 20% of U.S. food waste, which would eliminate 18 MMT of CO₂e.
THE INDUSTRIAL FOOD SYSTEM IS CAUSING MANY PEOPLE TO SUFFER. THE TRUMP ADMINISTRATION WILL FURTHER ASSAULT MARGINALIZED GROUPS; FIGHTING BACK THROUGH FOOD AND FARMING CAN BE POWERFUL.

In agriculture, the legacies of colonization and slavery continue to play out in the patterns of land ownership and farm policy, such as the racial discrimination faced by African-American farmers exemplified by Pigford v. Glickman (USDA), a successful class action lawsuit that uncovered racist federal farm loan and assistance programs. In addition, small and mid-scale family farmers face tough challenges in an increasingly globalized food economy.

21.5 million food workers, the largest private sector of the economy, suffer some of the worst labor abuses and earn the lowest median wage ($16,000 annually) among workers in all industries with major racial and gender disparities. A recent study found that “for every dollar earned by white men working in the food chain, Latino men earn 76 cents, Black men 60 cents, Asian men 81 cents, and Native men 44 cents. White women earn less than half of their white male counterparts, at 47 cents to every dollar.” Communities—disproportionately low-income and communities of color—in the vicinity of industrialized agriculture suffer health impacts of air and water contamination. 13% of American households are food insecure, and obesity rates have doubled in adults and tripled in children over the past 30 years. Figure 2 outlines many of the food- and agriculture-related social injustices faced by a variety of disadvantaged groups.

The Trump administration is poised to assault and further undermine the health of America’s rural and urban communities. We can expect to see the slashing of regulations that protect communities from health and economic impacts of industrial agriculture and the rollback of funding for a wide range of supports, from agricultural conservation practices to government food assistance programs and healthy school lunches. Trump’s transition notes on agriculture threatened to “fight the good food move-

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**FIGURE 2: Who Is Most Hurt by Our Current Food System?**

<table>
<thead>
<tr>
<th>PRODUCTION</th>
<th>PROCESSING &amp; DISTRIBUTION</th>
<th>CONSUMPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACTORY FARM NEIGHBORS</td>
<td>Higher rates of asthma, cancer, and pesticide poisoning</td>
<td></td>
</tr>
<tr>
<td>INDUSTRIAL FARMERS</td>
<td>Higher cancer rates and reproductive health issues from toxic outputs</td>
<td></td>
</tr>
<tr>
<td>FARM WORKERS</td>
<td>Face physically harsh working conditions, labor abuse, below-minimum wages, no paid overtime</td>
<td></td>
</tr>
<tr>
<td>SMALL+MID-SIZE FARMERS &amp; RANCHERS</td>
<td>Under-resourced relative to big agriculture</td>
<td></td>
</tr>
<tr>
<td>INDIGENOUS PEOPLES</td>
<td>Not permitted to hunt &amp; gather in traditional ways; relegated to marginal lands</td>
<td></td>
</tr>
<tr>
<td>BLACK FARMERS</td>
<td>Face significant USDA discrimination; limited access to land, resources, and aid</td>
<td></td>
</tr>
<tr>
<td>IMMIGRANT FARMERS</td>
<td>Face language and cultural barriers to entering mainstream and accessing resources and assistance</td>
<td></td>
</tr>
<tr>
<td>FOOD SERVICE &amp; GROCERY STORE WORKERS</td>
<td>Face physically harsh working conditions, labor abuse, below-minimum wages, no paid overtime</td>
<td></td>
</tr>
<tr>
<td>POULTRY &amp; MEAT PROCESSORS</td>
<td>Face physically harsh working conditions, labor abuse, below-minimum wages, no paid overtime</td>
<td></td>
</tr>
<tr>
<td>RURAL CONSUMERS</td>
<td>• Despite living in agricultural areas, often no access to real food • Few economic opportunities</td>
<td></td>
</tr>
<tr>
<td>LOW INCOME URBAN CONSUMERS</td>
<td>• Pay higher prices for worse food sold at corner stores close to home • Higher levels of diet-related chronic disease, unemployment, and poverty • Limited access to/ownership of land to grow food</td>
<td></td>
</tr>
<tr>
<td>INCARCERATED PEOPLE</td>
<td>• Fed harmful meals • Sometimes forced to work as unpaid farm laborers</td>
<td></td>
</tr>
<tr>
<td>INDIGENOUS PEOPLES</td>
<td>• Extreme poverty &amp; food insecurity twice as likely as other families • Very limited access to healthy &amp; traditional foods • Highest rates of diabetes</td>
<td></td>
</tr>
<tr>
<td>YOUTH</td>
<td>• 1/5 of youth now obese • 1/3 of all youth &amp; 1/2 of youth of color will develop diabetes • Food &amp; beverage industry targets youth • Fed harmful school meals</td>
<td></td>
</tr>
</tbody>
</table>

ment,” the growing national effort to ensure that all Americans have access to healthy and affordable food. These revelations drive to the heart of so many of our core values of social justice, equity, and environmental health.

Yet many agricultural regions supported President Trump, believing he will deliver decreased taxes and regulation and greater economic opportunity. 60% of farmers on farms larger than 180 acres are dissatisfied overall with the state of agriculture today. In addition, farmworkers are an important group—half of the approximately 2.2 million farmworkers are undocumented, almost half are citizens.

There is a timely opportunity to expose how Trump’s agenda will hurt farmers, workers, and rural economies, and support the concerns of farming communities and build power. We can build further influence across rural-urban divides by uniting producers, farm worker families, rural residents, and consumers whose health is hurt by the current food system.

“Labor and justice (aka Fair Trade)! This is an easy one. We’re talking about supporting good jobs—that offer fair wages, hours, and benefits, and doesn’t poison workers with harmful pesticides, insecticides, and fertilizers. Also, were talking about making Organic, local, fresh, and healthy foods available at affordable costs to all people—especially low income communities and children (aka no more subsidies for Big Ag, no more farm bills, and additionally, more safe food/healthy kids bills and other subsidies for preventing health problems like obesity and diabetes). Lastly, diversity is resiliency. We need to support diverse indigenous native species and agriculture so that we are not forced to have weak, unsustainable, monoculture, mega-farms.”

— survey respondent

“Farmers/ Farm workers rights and economic impacts. As we shift farming practices, this will necessarily impact farmers and farm workers. We need to make sure that the changes/transitions we are advocating for are equitable.”

—survey respondent

**SIERRA CLUB HAS A LEGACY AND POWERFUL CURRENT WORK AND INFRASTRUCTURE TO BUILD ON**

Sierra Club has advocated for sustainable agriculture for decades. Seasoned advocates of sustainable agriculture spoke about the influential role of Sierra Club in key policy moments in the evolution of sustainable agriculture. One policy advocate interviewed observed: “Organics got into law in 1990 because of Sierra Club getting in there,” and another commented: “When Sierra Club weighed in [on the farm bill], it had a big impact.”

In addition, the organization played a leadership role in establishing forums for collaborative policy on sustainable agriculture. Sierra Club served as a founding member of the National Sustainable Agriculture Coalition, and in the words of one policy advocate, “[t]he Conservation Coalition was started more or less by Sierra Club in 1986 after we all participated in winning the first farm bill title in 1985... it has more or less met once per month since 1986.”

In the late 1990s and early 2000s, Sierra Club engaged in extensive work challenging concentrated animal feeding operations (CAFOs), as well as broader efforts raising awareness about the impacts of industrialized agriculture on people and the environment. Sierra Club litigated egregious actors, winning several landmark legal battles such as securing a ruling from a federal court in Kentucky that Tyson Foods was responsible for reporting toxic air pollution from their contractors’ facilities (Sierra Club v Tyson Foods Inc.). Sierra Club also engaged in broad-scale watchdog efforts, holding large agribusiness operations accountable for their impacts.

As this work wound down in recent years, other organizations picked up some of the work (e.g., Center for Food Safety took up more litigating of CAFOs after Sierra Club scaled down and the Socially Responsible Ag Project formed with the leadership of several former Sierra Club CAFO activists). However, big gaps remain and members of organizations active in opposing industrial agriculture expressed interest during interviews in Sierra Club assuming a stronger role going forward.

Sierra Club has also been active since the 1980s in opposing damaging grazing practices, particularly on public lands. The Sierra Club Grassroots Network’s grazing campaign advocates to eliminate the adverse effects of livestock production on native species and their habitats on all federal public lands.
While Sierra Club has not had a formal coordinated national effort on food and agriculture for many years, today there are numerous discrete efforts in chapters, groups (local entities under the chapters), and in the Grassroots Network. At least half of all chapters have teams working on food and agriculture. More specifically, according to the Web Interactive Leadership Directory (WILD), in Sierra Club currently there are:

- 13 chapters and 57 groups with formal agriculture leads;
- At least 14 chapters and 36 groups with active work fighting CAFOs;
- 16 Water Sentinels chapter committees and 32 groups;
- 33 chapters and 92 groups with leads on water quality/habitat;
- 13 chapters and 26 groups with GMO leads; and
- 10 chapters and 25 groups with leads on grazing

There are instances of chapter committees or work addressing various aspects of food and agriculture that are not listed in WILD. For instance, several chapters (e.g., Illinois, Georgia, Iowa) are active on pollinator protection, the Loma Prieta, South Dakota and Iowa chapters have committees working on agricultural soil carbon sequestration, and several chapters (Michigan, Georgia, Atlantic, and others) work on the ecological impacts of dietary choice (primarily through promoting a plant-based diet). Additional unlisted efforts range from industrial aquaculture (WA) and fisheries (ME) to community gardens (Atlantic, Hawai‘i). Figure 3 outlines key areas of interest among chapters.

The Grassroots Network has several national teams that play important roles in the Sierra Club food and agriculture ecosystem. These include: agriculture and food, fisheries management, genetic engineering, grazing, Meatless Mondays campaign, pollinator protection campaign, sewage sludge, vegan, national water

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**EXAMPLES OF CHAPTER-LEVEL FOOD AND AGRICULTURE EFFORTS**

- **Michigan Healthy Farms, Healthy Food Campaign:** The Michigan Chapter advocates for civic engagement on food and agriculture and a shift in dietary choices with “safe, healthy food” lens. The Chapter collaborates with other organizations on the Less=More Campaign, with the core message: “What kind of farm practices are your tax dollars funding? Current Farm Bill subsidies largely benefit industrial agriculture operations. Giving less taxpayer money to these big polluters could mean more to the entire state of Michigan.”

- **Atlantic Chapter Farm and Food Committee:** The Atlantic Chapter works to “fight industrial agriculture such as factory farms and GMOs and work to promote sustainable agriculture solutions for a vibrant rural economies and health food systems.” The group has also worked on pollinator protection, healthy food access, and impacts of agriculture on climate change. In addition to its farm and food work, the chapter has a Biodiversity/Vegetarian Outreach Committee and a Zero Waste Committee that addresses food waste and composting.

- **Iowa Sustainable Agriculture Committee:** The Iowa Chapter’s work on agriculture is broad, fighting CAFOs while promoting sustainable agriculture (including restoring and preserving soil) and promoting regional food economies. They host an extensive collection of fact-sheets on many aspects of agriculture, the environment and community health.

- **Maryland Sustainable Agriculture Committee:** The Maryland Chapter Clean Water Campaign focuses on agricultural runoff from chicken farms and other industrial operations, arguing that “[i]n the Chesapeake Bay Watershed, there are hundreds of chicken farms. In many instances, the chicken manure from these farms is washed off by rain into the Bay. Agriculture is also responsible for polluted runoff of other animal waste, fertilizers, and pesticides.” The Maryland Chapter also has a campaign fighting antibiotic use in animal agriculture and lists tips for greater food sustainability.

- **Illinois Chapter:** The Illinois Chapter is doing extensive advocacy to protect pollinators, including advocating for habitat on public and private lands, developing policy to limit pesticide use, and educating the public. Their work on nutrient pollution of waterways and deploy citizen science to monitor and hold polluters accountable. The Illinois Nutrient Pollution Reduction Campaign is an ongoing effort to implement the strategy finalized in 2015 to meet Gulf Hypoxia Task Force reduction targets and clean up in-state waters.
sentinels, zero waste—community responsibility, and zero waste—producer responsibility.

The online advocacy community SierraRise has also been very active on a wide variety of stand-alone food- and agriculture-related actions. Its campaigns have helped reduce neonicotinoid usage at the corporate and state level, defeat the proposed Syngenta-Monsanto merger, protect the first endangered bumblebee, support Sakuma Brothers farmworkers in their successful drive for union recognition, improve Starbucks’ and McDonald’s palm oil policies, convince Whole Foods to stop selling products created using prison labor, and more.

In addition to this foundation of earlier and current activity, Sierra Club has a ready infrastructure to launch a powerful campaign, including:

- The organization’s unique ability to link local and national through its chapter structure—which includes lobbying staff in almost every state, members in every congressional district, and active volunteers all over the country;
- An active base of 2.7 million members and supporters to mobilize on key issues. Its digital strategies, which include a 505,000-strong group of activists in SierraRise (including 136,000 who have been active on food system issues) and the powerful AddUp engine;
- Powerful policy, legal, and communications infrastructure; and
- Nationwide grassroots teams of leaders active in topic-based affinity groups.

**SIERRA CLUB STAFF AND VOLUNTEERS STRONGLY SUPPORT LAUNCHING A FOOD AND AGRICULTURE CAMPAIGN.**

A survey of 250 Sierra Club paid and volunteer staff showed a high level of support for a national food and agriculture effort. They were asked: “Keeping in mind that the Sierra Club can only take on a limited number of issues, what is your level of support

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**FIGURE 3: Sierra Club chapters’ current and/or recent areas of work related to food and agriculture**
for the Sierra Club launching a food and agriculture program or campaign?” 87% of respondents had moderate to very high interest in launching a national food and agriculture campaign (see Figure 4). In addition, several chapter staff reported that they wanted to work on industrial agriculture but did not have the resources.

**FIGURE 4: Staff and volunteer support for national food and agriculture effort**

<table>
<thead>
<tr>
<th>Staff and volunteer support for national food and agriculture effort</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>7%</td>
<td>20%</td>
<td>67%</td>
<td>5%</td>
<td></td>
</tr>
</tbody>
</table>

Source: U.S. EPA’s inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-

Interest in specific issues varies but there is strong support for a wide variety of focal points.

What issues do Sierra Club staff and volunteers care most about? Among the 250 respondents:

- 20% listed water
- 20% listed pesticides (a further 8% listed chemicals)
- 16% listed animal agriculture
- 15% listed climate change or global warming
- 7% listed monoculture

But most staff and volunteers said they would support Sierra Club taking action on a variety of outcomes (see Figure 5).

**FIGURE 5: Staff and volunteer support for a range of food- and agriculture-related climate solutions.**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing the share of vegetables and plant-based protein in our diets</td>
<td>37%</td>
<td>58%</td>
<td>144%</td>
<td>6%</td>
</tr>
<tr>
<td>Carbon farming/carbon sequestration in agricultural soils</td>
<td>52%</td>
<td>72%</td>
<td>98%</td>
<td>40%</td>
</tr>
<tr>
<td>Agro-ecological and regenerative farming practices</td>
<td>16%</td>
<td>57%</td>
<td>156%</td>
<td>16%</td>
</tr>
<tr>
<td>Reducing the scale of animal agriculture and/or combating CAFOs</td>
<td>12%</td>
<td>56%</td>
<td>173%</td>
<td>5%</td>
</tr>
<tr>
<td>Regenerative grazing practices on public lands</td>
<td>31%</td>
<td>70%</td>
<td>114%</td>
<td>23%</td>
</tr>
<tr>
<td>Shifting subsidies and other incentives to support sustainable agriculture and local food enterprise</td>
<td>8%</td>
<td>37%</td>
<td>191%</td>
<td>7%</td>
</tr>
<tr>
<td>Local food systems</td>
<td>15%</td>
<td>57%</td>
<td>162%</td>
<td>5%</td>
</tr>
<tr>
<td>Personal food production (e.g., community gardens, backyard farming, school gardens, etc.)</td>
<td>30%</td>
<td>86%</td>
<td>119%</td>
<td>9%</td>
</tr>
<tr>
<td>Reducing food waste</td>
<td>32%</td>
<td>89%</td>
<td>117%</td>
<td>6%</td>
</tr>
</tbody>
</table>

87% of paid and volunteer staff had moderate to very high interest in launching a national food and agriculture campaign.

**SIERRA CLUB HAS A LOT OF SUPPORT FROM THE FIELD TO LAUNCH A NATIONAL FOOD AND AGRICULTURE EFFORT.**

The idea of a possible new Sierra Club food & ag campaign was generally very well received by external interviewees. Sierra Club was highly regarded among those interviewed, and there was appreciation expressed for the organization’s growing social justice orientation, although two interviewees suggested that chapters may have varying degrees of cultural literacy and one interviewee who shared previous experience with a Sierra Club effort that she felt competed with her project in a way that detracted from it.

Importantly, competition for funding was the most oft-cited concern about Sierra Club launching a campaign among interviewees from other advocacy organizations, in particular the smaller ones. Additional concerns that arose during one or more interviews included anxiety about wanting to make sure that Sierra Club came in with a sophisticated analysis on the issues and “entered the space” in a graceful way, and a perception of, or experience with, large organizations taking credit, steamrolling smaller organizations, and speaking for allies rather than helping make space for them to speak for themselves.

“My experience is that the big groups are much more successful at obtaining the grant money compared to the organizations like mine that barely even have a development staff. I don’t want to see my grants be reduced because the funding pie isn’t growing. That would not be cool. The Club has to be very aware and not just programmatically supportive but has got to find a way to grow the pie so there is more money available for the groups that have been doing the work and aligned with and supporting the Club in reaching common goals.”

— Interviewee
THE ORGANIZATIONAL LANDSCAPE

The food and agriculture work of leading national environmental organizations was surveyed. Most large national environmental organizations have established food and agriculture programs, many of which now have a strong focus on antibiotics, GMOs, and pollinators. A few are starting to step into soils work — for instance, NRDC has a new pilot initiative to incentivize cover cropping (a carbon sequestering practice) through a new crop insurance program, Friends of the Earth is starting to promote soil health through organic farming and agroecology, Union of Concerned Scientists is promoting sustainable agriculture and agroecology with some research on soil health, and Center for Food Safety is promoting soil carbon sequestration as linked to climate, with a focus on public education and modest diet/climate links. In the environmental NGO community, there is a growing emphasis on social justice. Union of Concerned Scientists (while not strictly an environmental organization per se) has shown leadership in this area by developing alignment, partnerships and fundraising support for HEAL (Health, Environment, Agriculture, Labor) Alliance, a group of 50 organizations working for justice in these realms.

Center for Food Safety, Environmental Working Group, Food and Water Watch, Friends of the Earth, and Humane Society of the United States all include a power frame to at least some degree and target the underlying structure of the food system, including critiques of consolidation and large-scale agribusiness. Environmental Defense Fund and The Nature Conservancy are working for reform within the current system of large-scale agriculture, and — in this context — are doing effective work reducing emissions in large-scale supply chains. Both are promoting natural systems carbon sequestration and payments for ecosystem services. More detailed environmental nonprofit activities are described in the proposed work areas below (Section 8).

These organizations represent a small fraction of organizations in the food and agriculture advocacy space. Sometimes referred to as the “good food movement,” this movement of movements includes the overlapping and interconnected efforts for sustainable and regenerative agriculture, food sovereignty (which focuses on the right of communities to control their own healthy, just and sustainably sourced food supply), anti-hunger, food access, community food security, local food, and food justice, among others. The scope of this report does not include a comprehensive survey of organizations across these topic areas.
THE FUNDING LANDSCAPE

Food and agriculture as a focus of philanthropy is on the rise. Sustainable food and agriculture has been a strong topic of conversation in the Environmental Grantmakers Association, where contributions to food and agriculture from members rose 50% from 2011 to 2013.36 The national funder affinity group Sustainable Agriculture and Food System Funders increased from 12 members in 2003 to almost 100 in 2016. In this community, there are many entry points but the most popular areas of funding have been local and regional food infrastructure, food access, local, state and tribal policy, equity and social justice, and environmental protection.37 A third of the members of Sustainable Agriculture and Food System Funders give to climate issues. Nevertheless, funding for food and agriculture work was perceived to be very competitive: competition for limited funds was the most common concern expressed by interviewees in advocacy organizations.
GOOD FOOD, WITHIN REACH

SIERRA CLUB’S FOOD AND AGRICULTURE CAMPAIGN

A STRAWDOG PROGRAM FRAMING

The Sierra Club works to make American agriculture a solution to the climate crisis rather than a cause. Food and agriculture is a complex system that involves many interconnected problems. These include socio-economic issues (e.g., the erosion of food sovereignty, an epidemic of diet-related diseases, job loss, poverty and food insecurity, and food waste) as well as environmental problems (climate change, contaminated air and water, honey bee colony collapse and loss of native pollinators, GMO contamination of organic and conventional crops and emergence of resistant pests and weeds, loss of biodiversity, and degraded and depleted soils). Keeping a primary focus on climate, the campaign will tackle the root causes of these multiple crises, in particular the consolidation of control and influence by an ever-smaller number of agribusiness companies.

We support food production rooted in agroecological principles—conserving and renewing resources, encouraging diversity and diversification, building democracy, taking a whole systems perspective, and fostering justice and dignity for everyone across the food system, such as fair wages and benefits for workers. The Sierra Club has long worked to protect and steward the nation’s wild places—we are also committed to supporting effective stewardship of our cultivated and grazed lands while sustainably producing healthy food and fiber for all.

WHAT WE DO: Support thriving regional food economies sourcing from farms and ranches that effectively steward the land and climate, and supply chains that are sustainable and socially just.

Specifically, we:

• Foster thoughtful dialogue and action on the climate impacts of diet;
• Creatively showcase and advocate for policies that support and incentivize regenerative organic agriculture rooted in regional food systems;
• Work to eliminate CAFOs and make ranching more sustainable;
• Support American agriculture and rural economic development that redresses the legacy of racism and supports all farmers in being effective land and climate stewards; and
• Encourage community and communion—connecting people to Nature through food and farming.

Solutions we advocate for are aligned with Sierra Club’s agriculture policies as well as the Real Food Platform of the HEAL Alliance (see Figure 6), which has been created by organizations representing rural

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FIGURE 6: The HEAL Alliance Real Food Platform

ECONOMY
1. Ensure dignity for food workers and their families
2. Provide opportunities for all producers
3. Ensure fair and competitive markets
4. Strengthen regional economies

HEALTH
1. Dump the junk: curb junk food marketing
2. Make real food the norm in every neighborhood
3. Increase food literacy

ENVIRONMENT
1. Phase out factory farming
2. Promote sustainable farming, fishing and ranching
3. Close the loop on waste, runoff and energy
and urban farmers, fisherfolk, farm and food chain workers, rural and urban communities, scientists, public health advocates, environmentalists, and indigenous groups as a unified compass for transforming the US food system for beneficial outcomes for health, environment, agriculture, and labor.

Sierra Club itself is a broad grassroots movement with locally determined and led efforts to foster healthy food and farming. Our national campaign supports and amplifies efforts of our chapters, groups and grassroots network, which are working on local priorities that advance our campaign goals.

**OUR WORK AREAS:**

1. **Build sustainable and just meat supply chains.**
   We engage federal, state, and local administrative policy and legal mechanisms to combat large-scale concentrated animal agriculture and promote positive alternative supply chains that incentivize and enable well-managed grazing and curtail the devastating impacts of poorly managed ranching.

   Our chapters and grassroots groups are:

   - **Building regional food economies**
   - **Combating CAFOs** (concentrated animal feeding operations) and their impacts on local communities, land, and water
   - Fighting poorly managed grazing on public lands that erodes soil, pollutes water, and degrades landscapes and biodiversity
   - Promoting food sovereignty

2. **Restore the carbon cycle and build healthy soils.**
   We build wealth in rural communities through richer soils and incentives for carbon sequestration, and close the food waste loop by diverting food waste from landfills and promoting composting.

   Our chapters and grassroots groups are:

   - Running a pollinator protection campaign to protect food security, promote biodiversity, and reduce the use of neonicotinoid pesticides
   - Combating GMOs and other biotechnology that increase the use of climate-harming agricultural chemicals, undermine farmers’ control of seeds, and risk broad ecological contamination
   - Campaigning for zero waste to reduce food waste and increase compost production while enhancing food access and food security
   - Fighting the dumping of sewage sludge on agricultural lands
   - Advocating for federal administrative policy reforms that will incentivize regenerative farming and healthy soils

3. **Promote sustainable diets.** We campaign for climate-friendly public procurement (food purchasing) policies and shifts in foodservice and restaurant menus to reduce or eliminate the meat served in more than 1 billion meals. We engage local networks by coordinated **Our Plate, Our Planet** dialogue dinners on diet + climate.

   Our chapters and grassroots groups are:

   - Promoting the benefits of plant-based diets
   - Hosting diet + climate community events
   - Advocating for healthier, climate-friendly food options

4. **Rural America dialogues.** Engage dialogue, storytelling and relationship building to lift up the voices of those who steward our climate by tending the land.

   Our chapters and grassroots groups are:

   - Hosting exchanges between inner city residents facing food insecurity and rural communities affected by CAFOs to highlight common causes.
   - Building volunteer-led local food and agriculture campaigns in rural areas to achieve meaningful improvements for rural communities.

   “[Sierra Club should focus on] the overarching issue of ‘care and tending of the land’ as an ethical philosophy to connect our communities to what the land provides, as stakeholders in the health of the planet in an era of climate change.”

   — survey respondent
BROAD RECOMMENDATIONS ON APPROACH

FOR A NATIONAL SIERRA CLUB FOOD AND AGRICULTURE CAMPAIGN

1. Take strong input and guidance from the grassroots. Perhaps more than any other issue area the Sierra Club tackles, food and agriculture is deeply embedded in local culture and ecology. Sustainable food and farming systems are inherently tied to strong control of communities over their food systems, healthy local economies, and engaged citizens. More than just holding this as a value, this program’s activities should place strong emphasis on listening to, building on, and supporting local chapters and groups in their efforts that align with the national campaign.

2. Provide a backbone function for Sierra Club food and agriculture advocacy at all levels. The Sierra Club has carried out, and continues to lead, impactful work on food and agriculture at the local and state levels. One priority of a national food and agriculture program should be to link and amplify this work while strategically tying it to national policy advocacy. Notably, there is a reported general lack of strategic coordination among these various efforts, even among committees working on the same topic across geographies. In addition, it was noted that some allies' requests for Sierra Club to support actions and/or campaigns led by other organizations didn’t have anywhere to go in the organization and therefore weren’t able to move forward. Finally, informal conversations with chapter staff and volunteers suggested that several chapters were interested in working on agriculture. One function of a national-level campaign should be to supply an effective backbone for agriculture and food work, providing a communications, strategy, and information sharing framework and a national megaphone while allowing chapters the freedom to
effect change on local priorities. The reach and impact of this work could be significantly amplified by the following services provided by the national campaign:

a. Helping communicate and replicate successes from this work at a bigger scale;
b. Facilitating relationship-building with key organizations and partners in the movement;
c. Providing strategic input to internal food and ag efforts as requested;
d. Supporting effective coordination of food and ag projects (and their messaging) to avoid replicating the wheel, have projects add value to each other;
e. Convening periodic forums for sharing information and best practices and strategizing;
f. Supporting the fluency of Sierra Club staff on food and agriculture issues, and highlighting intersections with their own projects;
g. Providing a logical conduit for external partners seeking Sierra Club support for actions or engagement on issues; and
h. Targeting training and assistance for strategic districts (e.g., those with federal Ag Committee members)

3. **Build on positivity and hope.** Elevate positive solutions more than problems wherever possible—the benefits of local food economies, organic and ecological farming, and the stories of people who grow and make our food. Cultivating a positive and solutions-oriented approach, and appealing to the heart as well as the head and the feet, will attract and engage more people.

4. **Collaborate meaningfully from the start with affected communities.** As an organization committed to social justice, the Sierra Club has an opportunity to develop a food and ag program in meaningful partnership with affected communities from the beginning, crafting messages and program priorities that grow up in alignment with the needs, and leadership, of these communities: growers and ranchers hurt by consolidation, workers who have been exploited, communities whose health is impacted by industrial agriculture, those whose communities and the value of their homes have been hurt by industrial agriculture, those who have been marginalized due to racism in our national and local agriculture and food policies, those whose health has been negatively affected by a food economy that subsidizes unhealthy food. The Sierra Club has the opportunity to leverage its reach and influence to help build space for voices typically more politically marginalized, in particular in communities affected by the current industrialized food and agriculture system (which in some cases includes those within Sierra Club groups and the broader membership). The food and agriculture program should build in adequate staff time to deeply listen to the needs of these communities, develop trusting and authentic relationships, and build emerging frames, solutions, actions, and fundraising efforts out of these relationships. Support local groups and chapters in doing the same.

“**Build networks, learn from each other. Show up for each other’s fights. There is still a huge divide between food justice and sustainable agriculture. Especially food justice and environmental justice... There are huge bubbles. That’s a real challenge: how do you get people in urban centers to care about what some would see as ‘sacrifice zones’?”**

— interviewee

Photo: Doug Gosling
“To have a good mix in terms of outcomes, if you have strong commitment to social justice; this has to be exemplified not just in outputs but also the process.”

— interviewee

“It’s really important and mutually beneficial that there is an explicit intent and action to collaborate with local groups. This is the delicate part: that the Sierra Club is not leading the efforts but understanding what the needs of the local groups are in developing food sovereignty processes and then be able to use the Sierra Club’s position and resources to collectively synergize those efforts or amplify those efforts.”

— interviewee

“As NGOs, we need to own ourselves and understand our role in processes. We haven’t done a good job on this aspect, so have undermined the work of grassroots organizations and created a lot of mistrust. We have to really put our heads around this underlying issue—how we position ourselves as staff to work with the movements and rebuild the trust. Understanding power and relationships is fundamental to the process. How do we do this? Show up, show we are actually engaged and understand the conversation and the processes.”

— interviewee

“Because the Sierra Club has lagged so far behind other NGOs on this issue, the best short-term (catch-up) strategy we can employ right now is to be a good team player with the lead NGOs. That means responding in a timely way to sign-on requests from other groups—at a minimum.”

— survey respondent

5. Apply the Jemez principles in campaign work.
The Jemez Principles for democratic organizing should infuse all activities in the food and agriculture campaign, both internally and externally: Be inclusive. Emphasis on bottom-up organizing. Let people speak for themselves. Work together in solidarity and mutuality. Build just relationships among ourselves. Commit to self-transformation.

6. Leave space for emergence and adaptiveness.
The food system is a highly complex system involving both human and ecological dimensions. Recognizing that interventions in complex systems have unintended consequences, collaborate as broadly as possible across the system to minimize these, prototype where feasible, and evaluate and adapt as able. This campaign will likely see some level of conflict as a result of the many interrelated issues and the broad array of related grassroots network teams with diverging interests.

7. Build Sierra Club as an effective voice in food and agriculture.
Identify and pursue leadership opportunities to lay out the organization’s contribution to the field. The landscape analysis revealed some internal and external skepticism about the Sierra Club’s ability to effectively ally with food producers and a not-uncommon assumption that the Sierra Club is anti-farming and ranching. In particular:

• Consider joining national leadership circles (e.g., AGree, Coalition on Agricultural Greenhouse Gases, Animal Agriculture Reform Collaborative, Food Policy Action);
• Launch an agricultural advisory group of successful agricultural leaders; and
• Demonstrate alliances with agriculture, for example by identifying and lifting up Sierra Club members who are farmers and land stewards (and Farm Bureau members).

“It was really helpful to have the Sierra Club ag committee that was primarily farmer volunteers. Is it possible to reinvent that? They were very good contributors to our policy development work. There were a couple of times we would get invites to be at a congressional meeting, and a Sierra Club ag person would testify on our behalf.”

— interviewee

“Internally to Sierra Club, build ‘kitchen cabinet’ of staff and own advisors: building relationships is the single most critical thing you can do. You have to understand the oral history of the Michael Slighs and Michael Ablemans.”

— interviewee
BROAD RECOMMENDATIONS ON CONTENT

FOR A NATIONAL SIERRA CLUB FOOD AND AGRICULTURE CAMPAIGN

1. **Address climate adaptation and mitigation as two sides of the same coin.** Broad change in how we grow food is not just required to mitigate climate disruption but also to build climate resilience in our food supply. By 2100, climate change could cause U.S. wheat yields to fall by 20 percent, maize by 50 percent, and soybeans by 40 percent. Fortunately, the changes needed for adaptation and mitigation are one and the same: a meaningful shift in production practices towards organic and agroecological practices will mitigate GHG concentrations in the atmosphere while at
the same time improving the resilience of agricultural systems in the face of climate change (and thus food security) and mitigating the substantial environmental and health impacts of the agriculture industry—air quality, surface and groundwater quality, erosion of biodiversity and habitat, and the declining nutritional content of food.

2. **Advocate for systemic change.** Don’t focus on climate to the exclusion of broader ecological health and social justice. Focus on climate outcomes but only where there is alignment with broader ecological and social justice objectives. Some approaches to reducing the carbon footprint of agriculture, while providing clear benefits for the climate, may have negative consequences for the environment and social justice. For example, methane digesters on large dairies in California’s Central Valley, while mitigating methane emissions and generating energy, create ground-level air pollution in non-attainment areas. Similarly, approaches such as reducing methane emissions from enteric fermentation (direct emissions from ruminants) by adjusting cows’ diets, while likely to be supported by Sierra Club, do not promote systemic change and would not form a core strategy.

The recommendations below emphasize strategies that provide multiple co-benefits that address the broader landscape of issues and target root causes of both ecological and social problems.

3. **Focus on root causes but maintain flexibility to take on future issues as they emerge.** Interviewees expressed concern about a wide range of emerging issues, including further consolidation of our food supply, water supply shortages, intensified labor concerns, the coming global shortage of potash fertilizer (phosphorus), synthetic biology (synbio) technologies, the further destruction of forest and water resources as a result of marijuana legalization, and the expansion internationally of US companies with poor practices as regulations tighten here. Food tech also promises to be a hot topic—new technologies, such as growing milk from GMO yeasts and manufacturing meat from cell tissue, are emerging rapidly.

4. **Build an engaged “good food” movement.** In his October 5, 2016, *New York Times Magazine* article, “Big food fights back,” Michael Pollan pointed out: “Whenever the Obamas seriously poked at Big Food, they were quickly outlobbied and outgunned; the food movement still barely exists as a political force.” In spite of farmers markets and other direct marketing programs spreading like wildfire around the country, an inspired cadre of young farmers eager to farm, and countless local food and agriculture projects that make up the loosely knit “good food movement,” an influential movement remains a yawning gap in the field. The Sierra Club can play an important role building the advocacy skills and civic engagement of Sierra Club members and the good food movement.

5. **Align with and invest in communications to promote the principles of agroecology.** Based on an extensive review of recent scientific literature, the UN Human Rights Council report entitled *Agroecology and the Right to Food* demonstrates that agroecology, if sufficiently supported, can double food production in entire regions within 10 years while mitigating climate change and alleviating rural poverty. The report calls on states to enact a fundamental shift towards agroecology as a way for countries to feed themselves while addressing climate and poverty challenges. A Sierra Club food and agriculture campaign can combat the rhetoric and false solutions put forth by proponents of chemical-intensive agriculture and promote food production based on agroecological principles. In its communications, Sierra Club can help counter the meme that we need industrial agriculture to feed the world. Ample recent scientific research has shown that diversified and smaller-scale farms can not only provide increased productivity per acre, but greater economic justice benefits for rural communities.
PROGRAM RECOMMENDATIONS

FOR A NATIONAL SIERRA CLUB FOOD AND AGRICULTURE CAMPAIGN

A guiding question of the landscape analysis was: “What most needs to change to address climate disruption?” The integrated strategy proposed below aims to answer this question. It holds as key outcomes reducing the production and consumption of the most climate-damaging foods (meat and dairy), shifting animal agriculture to more sustainable forms of production, reducing food waste, and incentivizing organic regenerative agriculture with a focus on reducing emissions and sequestering carbon.

FIGURE 7: Good Food, Within Reach — Sierra Club Food & Agriculture Campaign

1. BUILD SUSTAINABLE AND JUST MEAT SUPPLY CHAINS.
Engage federal, state, and local administrative policy and legal challenges to combat large-scale concentrated animal agriculture and promote positive alternative supply chains that encourage smaller-scale and more sustainable and humane animal production.

- Collaborate with chapters on creating roadblocks to concentrated animal agriculture
- Create a targeted federal administrative policy effort for key wins that give farmers and ranchers more support for good practices
- Campaign against consolidation and advocate for supply chains that support low-impact ranching

2. RESTORE THE CARBON CYCLE AND BUILD HEALTHY SOILS.
Build wealth in rural communities through richer soils and incentives for carbon sequestration, and close the food waste loop by diverting food waste from landfills and promoting composting.

- Create equitable federal, state, and local administrative policy incentives for healthy soils, food waste, and composting
- Bring agricultural solutions into climate action frameworks at all levels
- Support urban gardens integrating composting and soil building education, particularly in low-income communities, fostering climate resilience and access to Nature

3. PROMOTE SUSTAINABLE DIETS.
Reduce or eliminate meat in 1 billion meals through climate-savvy food service campaigning and community mobilization.

- Campaign for less meat and other climate commitments in restaurants, institutional foodservice, and public procurement policy
- Produce an engagement framework and toolkit to support communities taking self-defined action on diet + climate
- Communicate creatively about climate + diet

4. RURAL AMERICA DIALOGUES.
Engage dialogue, storytelling, and relationship-building, lifting up the voices of those who steward our climate by working the land to mobilize and inspire decision-makers and the public.

- Build strong alliances with sustainable agricultural producers and workers with a particular focus on socially disadvantaged parts of the community and create pathways for the stories of agricultural climate stewards to be told to decision-makers and the public
- Creatively disseminate stories to amplify campaign advocacy efforts
1. BUILD SUSTAINABLE AND JUST MEAT SUPPLY CHAINS.

WHAT
We engage federal, state, and local policy and legal mechanisms to combat large-scale concentrated animal agriculture and promote positive alternative supply chains that incentivize and enable well-managed grazing and curtail the devastating impacts of poorly managed ranching.

RATIONALE
Raising a large number of animals in a concentrated space has a wide range of significant ecological and health effects, as described above. While grazing can be damaging to ecosystem health, causing soil erosion, carbon emissions, habitat degradation, species endangerment and biodiversity loss, water quality impairment, and desertification, growing evidence suggests that there are some forms of grazing management that can be restorative to degraded lands, benefiting native grasslands, providing wildfire management, and reducing the net carbon footprint of animal agriculture. Carried out in the right way, regenerative grazing can reduce greenhouse gas emissions from animal agriculture, partly or entirely outweighing the methane and nitrous oxide the animals emit. The state of science on “regenerative ranching” as a climate strategy is perhaps best summarized by Oxford University’s Food Climate Research Network:

“Advocates of grass-fed beef systems argue that well managed grazing livestock can help sequester carbon in soils. It is claimed that this sequestration can partly or entirely outweigh the methane and nitrous oxide the animals emit; potentially grazing livestock systems can even be emission negative...If sequestration is assumed the carbon footprint of beef can shift from very high to very low. But caution is needed...This is still an under researched area and the evidence base is still uncertain.”

So we must proceed with caution, but also recognize that, when considered holistically, good ranching practices are favorable over both CAFOs and destructive ranching practices.

The meat and dairy we obtain from livestock simply must be produced in less damaging ways. The overarching ecological benefits of organic, grass-fed, small- to mid-scale, and sustainably pasture-raised animals over feedlots and concentrated animal feeding operations (CAFOs) are undeniable, but care must be taken not to advocate too broadly for “grassfed” products that may issue from unsustainably grazed herds. Sierra Club should promote market differentiation of well-managed grazing from the broader grassfed category.

Sierra Club has a long legacy of effective work fighting CAFOs and industrialized agriculture and remains well positioned to contribute transformational leadership and resources to this fight. While some CAFO activists took their efforts outside of the Sierra Club when it was removed as a national priority in the early 2000s, there remains significant expertise, enthusiasm, and direct experience of the economic, health, community, and environmental effects of concentrated animal production within the Sierra Club around the country. Sierra Club national should re-energize its work combatting industrialized agriculture, providing key services to local groups and chapters to amplify their work and link it to national advocacy efforts to shift support towards ecological agriculture and climate-friendly farming, giving fresh voice to this work.

Transforming meat production at a systemic level must include going beyond fighting industrial animal production to addressing the consolidation of supply chains that is a main driver of increasing scale and concentration in animal production and the dramatic decline of family farmers and ranchers. Today, the meat industry is an oligopoly: 4 companies control 84% of beef processing and a full 96% of chicken producers are contract farmers with major companies like Tyson, Pilgrim’s and Perdue (which together account for about half of all chicken slaughter). Demonstrating and bolstering supply chains that foster thriving regional food economies is also needed as a rallying frame. For the long term, Sierra Club must develop lasting relationships with farmers as well as the labor com-
munity and affected local communities, working to understand what they are asking for and aligning advocacy efforts accordingly.

“It is a real problem that the big buyers say they are not being sufficiently pressured to purchase credibly more sustainable beef beyond issues like animal welfare, hormones and antibiotics (and ‘grass-fed’). I think the Sierra Club’s campaign prowess is much needed to lead efforts to raise the profile of the many conservation and climate change solutions that consumers and corporate buyers can incentivize and advance by ‘voting’ with their purchases.”

— interviewee

“Part of it is that big groups have fallen off policy, farm bill, and the ag approps work that we do, much to our dismay. EWG does but they’re anathema to ag groups. This is a big gap right now that we’d love to see filled. The fact that the Club might engage in some piece would be very advantageous.”

— interviewee

“Farming is a minority population wherever you go. Polls show that in the Midwest, people are sympathetic to agriculture. 60% have some familial connection to land. Show that you can be anti-CAFO but pro-farmer and pro rural economic development. Leverage the discontent of farmers who feel that big ag has limited their choices and pushed too much risk on them.”

— interviewee

“I think it would be helpful as a leading environmental organization to emphasize sustainable agriculture in DC. I think many legislators and White House staffers would be surprised since they don’t think of the cross-over of agriculture and the environment.”

— survey respondent

“Make the argument that the protection of the environment is not disconnected from worker health, safety and wellbeing... The human impacts are in many ways indicators of environmental practices. It isn’t a coincidence that CAFOs have the highest incidence of OSHA violations. Abuse of workers and abuse of environment go hand in hand. Connecting these things in the public eye is really important. Unmasking this is important. Don’t just pick a company because it’s a great target environmentally. Have other filters. Identify how to build coalitions with other organizations for a multi-sectoral approach showing interconnectedness of issues.”

— interviewee

Collaborate with chapters on creating roadblocks to concentrated animal agriculture

Theory of change: Increasing costs and business risk through enforcing environmental regulation, legal action, and coordinated public outcry in counties and states around the country will make it more expensive and difficult to produce meat and dairy products in harmful ways.

Outcome: No new CAFOs and a reduction in existing operations.

Notes on approach: Bolster and build on chapter state and local administrative policy work to create barriers to industrial animal production and facilitate local meat supply chains. Provide backbone support for enhanced strategy sharing across chapters, building a system for sharing knowledge and accumulated wisdom on a variety of agricultural issues. Facilitate sharing of strategy and model actions on state and local initiatives (e.g., zoning planning that would limit CAFOs; engaging NRCS State Technical Committees to advise the State Conservationists to restructure the NRCS ranking for funding agricultural practices under EQIP so they increasingly support sustainable livestock and certified organic livestock farm practices instead of those specific to CAFOs).

Annual result: Identification and communication of successful local and state strategies employed by Sierra Club and/or others. Sierra Club chapters are coordinating and amplifying local policy advocacy on industrial animal production and its social and environmental impacts.

“Don’t parachute in. Learn from the work the chapters are doing. Quite honestly, build on the Less=More work in Michigan. Less=More is brilliant messaging. Don’t forget what an incredible asset you have with MI chapter and Lynn Henning and Less=More.”

— interviewee
Supply large amounts of predictable and sustained funding to the chapters to allow them to work on these issues in each state. In order to support local, sustainable agriculture, Sierra Club needs to support local, sustainable Sierra Club entities. A top down campaign will be ineffective based on our experience previously. The national CAFO campaign worked because the model was one of funding a central support staffer knowledgeable about the issue and funding on the ground organizers who work with local communities and bring the advocacy skills and focus at the state level to the campaign. The Club absolutely needs to be prepared to work in many different forums—public health, legislative, water and air permitting, litigation, education and organizing."

—survey respondent

create a targeted federal administrative policy effort for key wins that give farmers and ranchers more support for good practices

Theory of change: Removing public subsidies to CAFOs through administrative interventions and developing incentives for good grazing practices and pastured poultry will drive more meat production to humane and environmentally sustainable practices.

Outcome: Farmers and ranchers receive more support for on-farm conservation and organic farming practices. Measures are in place to increase equity and accessibility by marginalized segments of agriculture (incl. small-scale, new entrant, immigrant and indigenous farmers, and farmers of color).

Notes on approach: The national campaign could support chapters with links to ag committee members, and more broadly enhance the capacity of Sierra Club members to educate decision-makers on these issues. Build strategy in consultation and collaboration with allies (e.g., Rural Coalition, National Sustainable Agriculture Coalition, Food and Water Watch, Environmental Working Group, National Family Farm Coalition, RAFI-USA, and others) to identify clear and specific objectives for federal administrative policy work and education. Partner with the Agriculture and Food Grassroots Team and chapters (n.b., the Michigan Chapter effort could be strategic given Senator Stabenow’s (D-MI) role as ranking member of the Senate Committee on Agriculture, Nutrition, and Forestry). Evaluate the benefits of joining Food Policy Action, Animal Agriculture Reform Collaborative, AGree, Coalition on Agricultural Greenhouse Gases, Conservation Coalition (facilitated by NSAC) monthly calls, and Rural Coalition’s strategy calls. One area of focus could include improved accountability measures in the EQIP application process to ensure funds are awarded to environmentally responsible farmers, such as listing citations for violation of any environmental or health-related laws, documenting compliance with state and federal environmental laws, and verifying successful completion of previously funded projects. Watch for other federal administrative policy opportunities to obstruct concentrated animal agriculture, support good grazing practices, and call out agribusiness influence in policymaking.

Annual result: 3 specific administrative outcomes we want to promote are identified in collaboration with chapters and partners and Sierra Club is actively engaged in advocating for these. Strong relationships are established with identified partners.

“ The sustainable agriculture movement is small and doesn’t have the numbers needed to support some of the much-needed policy asks. With Sierra Club’s capacity to draw big numbers, we could make such an important impact.”

Almost 80% of Sierra Club staff and volunteers surveyed expressed a high level of support for “shifting subsidies and other incentives to support sustainable agriculture and local food enterprise.” An additional 15% had moderate interest.
Campaign against consolidation and advocate for supply chains that support low-impact ranching

**Theory of change:** Demonstrating viable and credibly sustainable alternatives to CAFOs and regenerative ranching by differentiating and rewarding regenerative ranching and increasing marketing channels will create credible pathways to support a substantial shift in production. Organizing farmers, workers, and communities hit hardest by consolidation and confined animal agriculture to drive opposition to “big meat” builds power that will underpin the growth of sustainable supply chains.

**Outcome:** The political influence of big meatpackers is weakened and strong new supply chains for marketing sustainable and just farm products are in place.

**Notes on approach:** Consider supporting and bolstering labeling initiative such as Grasslands Alliance and opportunities for building sustainable alternatives for ranchers (e.g., rare breeds). Support strategic campaigns combating consolidated corporate agribusiness. Prioritize those led by farmers/ranchers, workers, and/or affected communities and simultaneously build a strong foundation for collaborative work going forward. Build relationships with National Farmers Union, Rural Coalition, National Family Farmers’ Coalition, Organization for Competitive Markets, Grasslands Alliance and other certifiers, and other like-minded production agriculture groups. Consider a focus on the injustices of contract chicken farming (e.g., collaborate with Food Chain Workers’ Alliance effort)—while this would likely not garner a strong climate benefit, there is good potential for building relationships and an early win. Consider supporting consumer campaigns and bolstering market based initiatives and labeling initiatives that focus on building viable market alternatives for ranchers such as Grasslands Alliance and the Better Burger Challenge. The issue of consolidation in seeds may a good entry point to galvanize farmers and ranchers.

**Annual result:** Strategy to differentiate meat produced with good ranching practices from “grassfed” in the marketplace is underway.

**Annual result:** Examples of credible “regenerative supply chains” that garner health and opportunity for workers and minimize environmental impacts are identified and promoted within campaign; at least 10 chapters are involved in meaningful efforts to advocate for meat from sustainably pastured animals.

**Annual result:** The Sierra Club has lent its muscle to 2-3 key efforts to undermine consolidated control of meat and secure legal protections for farmers to be able to question unfair contracts, exercise free speech, or resist anti-competitive practices.

“Polls show that in the Midwest, people are sympathetic to agriculture. 60% have some familial connection to land. The vast majority of people are urban and are experiencing negative impacts of industrial agriculture; this is a huge issue in some parts of the Midwest. The only thing that is preventing the urban population’s interest in big ag and regulation is that there is no good answer to ‘the Alternative.’ If you are against large-scale confined ag, you can be called out as being anti-farmer. How can you be pro-farmer, pro-rural economic development, and against the unregulated smokestack industry masquerading as agriculture in form of CAFOs?”

— interviewee
Who is working on sustainable and just meat supply chains? Sample activities of other environmentally oriented NGOs.

- **Animal Agriculture Reform Collaborative**: A collaboration of sustainable farmer, environmental, public health, social and economic justice, and animal welfare organizations working to bring about systemic change required to establish a sustainable and just animal agriculture system.

- **Friends of the Earth**: Fighting corporate consolidation and education, policy and advocacy work on animal agriculture, esp. antibiotics and pasture-based systems. Effective campaigns targeting large purchasers. Published *Guide to Avoiding Factory Farmed Meat and Dairy*.

- **Socially Responsible Agriculture Project**: Works throughout the U.S. helping communities protect themselves from the negative impacts of factory farms; gives family farmers, ranchers, and other rural citizens the tools needed to develop and sustain ecologically sound, economically viable, and humane farming alternatives to industrial-scale agriculture.

- **Food and Water Watch**: Address the challenges of corporate control of food, factory farming & food safety, broken democracy, climate change and environment, GMOs, and global trade through advocating for fair policies, organizing, legal action, research.

- **Earthjustice**: Emerging food and agriculture program will focus on feedlots, safer farming, climate and healthy food.

- **Center for Food Safety**: Fighting industrial animal agriculture. A big focus on antibiotics (e.g., published report on restaurants’ use of antibiotics in meat supply) and legal action on industrial agriculture. Legislative map of state policies pertaining to animal factories.

- **Environmental Working Group**: Big focus on ag chemicals (e.g., pesticides in produce, interactive maps of exposure, multiple reports, etc.); crop insurance, subsidies database, pollution from industrial animal agriculture, promoting sustainable agriculture and organic production, *Meat Eaters’ Guide to Climate Change*.

- **NRDC**: “Less Meat, Better Meat” approach. Effort on antibiotics in meat (corporate pressure, collaborating with school districts, policy work); less meat on menus in food service industry; new effort on fighting animal factories with legal strategies.

- **Slow Food USA**: Runs “Slow Meat” campaign to bring together “diverse people to turn the herd away from the tyranny of cheap meat and toward a food system that is good, clean and fair for all.”

### WORK AREA: BUILDING SUSTAINABLE AND JUST MEAT SUPPLY CHAINS

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2. RESTORE THE CARBON CYCLE AND BUILD HEALTHY SOILS.

WHAT
Build equitable incentives for agricultural soil carbon sequestration and emissions reduction, while closing the food waste loop by encouraging diversion of food waste from landfills and promoting composting.

RATIONALE
I. CARBON FARMING: RESTORING THE CARBON CYCLE FOR CLIMATE AND COMMUNITY
a. Soil carbon sequestration
Agricultural soils (and land use more broadly) is an increasing focus of international efforts to combat climate disruption. With progress advancing on renewable energy and little headway with other drawdown technologies, biogenic solutions are increasingly being looked to for mitigating climate change. Agricultural soil carbon sequestration can attenuate some of the worst impacts of climate change. The international “4 per 1000 Initiative” builds on the finding that a “4‰” (0.4%) annual growth rate of the soil carbon stock would make it possible to stop the present increase in atmospheric CO$_2$. As such, the technical potential for agriculture to draw down carbon from the atmosphere and store it in the soil is considerable.$^{41}$

At the same time, concerns have been raised that the potential for soil carbon sequestration is overstated or too narrow a focus. While the technical potential of agricultural carbon sequestration would be virtually impossible to achieve due to the many barriers to shifting agricultural practices at scale, even fractional gains could make very meaningful contributions to carbon drawdown. Approaches must take care not to focus exclusively on carbon to the detriment of other indicators of healthy soil or regenerative agriculture.

As a substantial share of agricultural emissions, crop cultivation is also essential to address. Application of nitrogen fertilizers alone is responsible for 64% of all U.S. nitrous oxide emissions.$^{42}$ Lastly, while increasing soil carbon sequestration has clear climate benefits, approaches should not focus solely on building...
soil carbon at the expense of broader soil health, which is more complex. Solutions must be nested in a more holistic soil health frame.

b. Ecological co-benefits
Building soil carbon through increasing organic matter provides climate resilience and ecological and health benefits such as enhanced soil fertility, water retention (drought and climate resilience), improved groundwater and surface water quality (reduction of pollution runoff, dead zones and algal blooms), erosion control, air quality improvements, yield stability, and enhanced biodiversity and habitat. In the last 50 years, we have lost half of all U.S. topsoil because of poor agricultural management practices. The Rockefeller Foundation-Lancet Commission on Planetary Health reports on studies showing that tillage agriculture leads to erosion rates that are 1-2 orders of magnitude higher than soil formation, threatening food security, exacerbating flooding as a result of decreased freshwater retention, and spurring microbial biodiversity loss from soil. Sierra Club worked to fight soil erosion in the 1990s. Of particular overlap with past and current Sierra Club work is the nexus between agricultural runoff and nutrient pollution (particularly nitrogen and phosphorus), a significant issue in many parts of the country.

c. Health and socioeconomic co-benefits
Accompanying the ecological benefits of building soil health are substantial environmental justice and community health benefits. Healthy soils contribute a host of beneficial outcomes. These include:

- Reducing harmful emissions from soil fumigants;
- Alleviating the contamination of drinking water in rural communities;
- Reducing soil erosion, a contributor to respiratory illness;
- Building opportunities for rural workforce development;\footnote{43}
- More nutritionally dense food; and
- Improved food security through increasing resilience of food production.

d. On-farm practices for soil carbon sequestration
There are a range of known sustainable agricultural management practices that sequester carbon and build soil health while enhancing crop productivity, including organic agriculture, minimizing soil disturbance (i.e., from tillage or poorly managed grazing), applying compost and other organic amendments, and maintaining plant cover as much as possible. Other practices include, for example, shifting from cultivated to uncultivated agriculture, planting trees
on agricultural lands and rangelands (silvopasture), planting wild edges, re-integrating animal and crop production, and planting deep-rooted perennial crops.

Incentives for soil carbon sequestration can be based on practices known to sequester carbon, or based on actual carbon gains (outcomes). Practiced-based approaches are complicated by the variability of carbon sequestration according to precipitation, soil type, land use history and status of carbon pools, geography, cropping systems and other factors, making it difficult to identify one-size-fits-all solutions and blueprint approaches. There are also cultural, technical assistance, financial, and risk barriers to widespread adoption of some carbon sequestering practices. Other limitations include, most notably, the issue of permanence—the retention of carbon in soils over the long-term. Just one year of tillage or drought can undo many years' work to sequester carbon. Soils are also variable in their ability to take up carbon and have a saturation point over which no additional carbon can be absorbed.

Outcome-based approaches, those which are based on actual measured gains in soil carbon, allow on-farm practices to be tailored to local conditions. Yet there are barriers to effectively measuring and monitoring soil carbon, including affordability (testing soil carbon levels accurately is possible but remains very costly) and variability (soil carbon levels tend to vary seasonally and from place to place even within the same field).

These challenges have slowed progress in developing schemes that effectively incentivize agricultural soil carbon sequestration. Scaling up sequestration will require financial incentives as well as easily navigable frameworks that don’t add significant regulatory burden or paperwork for farmers. We also need incentives that provide opportunities for marginalized producers to participate equitably in benefits. Finally, we need stable family farms prepared to implement best management practices—so creating conditions that encourage new entrants to farming and stem the decline of farmers will also be essential. Underlying all this must be a force advocating for agricultural drawdown and meaningfully advancing these solutions at scale.

II. CLOSING THE CARBON LOOP: FOOD WASTE AND COMPOSTING

40% of food is wasted and most of it ends up as the largest component of garbage in our landfills, where it is the leading source of landfill methane. Of highest priority, the recoverable portion of this waste (25%) should be salvaged for human consumption. The non-recoverable portion of this food which makes up 75% of all waste could also be salvaged from landfills (S. Vared, personal communication, August 30, 2016). Non-recoverable food waste can be de-contaminated and composted, the product of which can be used to build healthy soil on urban and rural agricultural lands, where it can further reduce greenhouse gas emissions by offsetting fertilizer use and accelerating soil carbon sequestration. In addition, it provides nutrient management and water quality benefits. Water quality is improved because compost binds nitrogen and phosphorus in the soil, reducing runoff. However, concerns about introducing weed seeds that may outcompete native plants, and taking care not to burden disadvantaged communities with siting large-scale composting facilities must be addressed in this context.

Currently, composting, and in particular small- and community-scale efforts, tend to be at a structural disadvantage in state policy and ecosystem services schemes. This appears to be a gap in the field that is not being addressed at scale. The Sierra Club is well positioned to build strong state and local incentives for climate-friendly practices on- and off-farm, including composting and agricultural soil carbon sequestration, in a way that simultaneously balances the playing field for small businesses and disadvantaged communities.

THE NUMBERS*

Just one soil building practice—planting cover crops—on half of all corn and soybean acres in the top 10 agricultural states would sequester 19 MMT CO$_2$e/year, equivalent to taking over 4 million passenger vehicles off the road.

Applying a single 1/2 inch of compost to 10% of rangelands would provide 113 MMT CO$_2$e/year for at least 6 years, equivalent to taking 24 million passenger vehicles off the road.

Reducing US food waste by 20% would mitigate 18 MMT CO$_2$e/year, equivalent to taking 3.8 million passenger vehicles off the road.

*Calculations and source data available on request.
The Sierra Club can be part of accelerating agricultural solutions to climate change, in particular by supporting a strong and diverse effort led by impacted communities and spurring needed administrative policy reforms that will accelerate change. In addition, as soil carbon strategies take root, there is a real opportunity for the Sierra Club to act to maximize co-benefits of broader ecological health, equity, and social justice. Outcomes of this effort will include the increased adoption of carbon sequestering agricultural practices with strong ecological and social justice co-benefits, a strong urban political base of support for carbon farming, the diversion of a significant portion of food waste from methane-producing landfills, and the provision of compost for use in building healthy urban and rural agricultural soils.

“There are 22-24 states that have banned yard waste from landfills. There has been a movement to weaken or repeal those laws, such as in Georgia, Florida, Nebraska and Michigan. Waste management companies and others who collect money from waste want that stuff going to landfills because of landfill gas recovery systems. They recover more landfill gas with biodegradable materials. But if you stop it, you don’t produce methane in the first place. They make so much money off landfilling. Landfill gas recovery is considered a renewable fuel in most states. It’s not a level playing field... and there are deep pockets donating big bucks to electeds to repeal these... Compost advocates do not have deep pockets...”

— interviewee

“We need more infrastructure for food waste recovery. It’s one of the biggest obstacles. We’re pushing for distributed, diverse infrastructure. We push for... more jobs, workforce development... but we also need the policies and institutional framework.”

— interviewee

“We have to hold the grief and hope of soil at the same time. That’s the definition of equity work.”

— interviewee

“I think carbon sequestration to soil to biological activity to cover crops could be a great anchor for the next stage of sustainable ag, food systems, organic... Soil is in all 50 states.”

— interviewee

Theory of change: Federal, state, and local rules that remove structural barriers and creates financial incentives for organic regenerative agriculture, while bolstering technical support and research for ecologically based farming systems, will create strong pathways for agriculture to shift from carbon emitting to carbon sequestering in ways that lead to broader ecological, economic, and social justice outcomes.

Outcome: The U.S., states, counties, and municipalities are providing just and equitable incentives for carbon-sequestering and environmentally sound agricultural practices.

Notes on approach: Synthesize and share best practices and funding mechanisms from around the country (possibly in collaboration with the California Climate and Agriculture Network). Engage chapters, groups, and relevant grassroots teams (sewage sludge, grazing, zero waste, pollinator protection, GMO/biotechnology) in strategy and partnership development to support those affected in championing solutions, and strategic planning to develop and implement local actions. Collaborate with food policy councils. Examples of best practices:

• Agricultural soils: California Healthy Soils Initiative (allocates $7.5 million/year toward on-farm regenerative soil practices); California Sustainable Ag Lands Conservation Program (allocated $37.4 million in 2016-7 to reduce GHGs by reducing sprawl onto farmland).

• Working with NRCS state technical committees and USDA staff to shift priorities and increase incentives for integrated farming practices, sustainably grazed animals, etc.

• Incentivizing recovery and composting of food waste from landfills: expanding efforts to ban organic waste and mandate waste recycling. Boulder and Seattle climate action plans incorporate composting as a strategy.

Soil carbon work should also be seen as a component of broader climate justice goals and Sierra
Club influence will help create space for frontline community voices in soil carbon dialogue to ensure opportunities for small-scale rural and urban farms to benefit from incentives for soil carbon sequestration.

**Annual result:** Members of at least 30 chapters’ leadership will have received training and tools to advance best practices and planning frameworks that support climate-friendly farming and/or healthy soils. 3 pilot efforts have been initiated.

**Annual result:** Federal and/or international climate action targets established and strategy underway.

> “It’s an interesting timing with state legislatures. Agriculture is last on the list of things that most legislators think about when they think of climate change and policies. The Legislature is predominantly urban and don’t have a clue about ag. This will remain a big challenge.”

— Interviewee

> “Soil carbon work is a part of a broader, more just transition to a carbon-free economy. That transition starts with organizing frontline communities and making sure that environmental justice has a place at the table at the very beginning of any policy or program development process.”

> “There is potential for thinking through carbon sequestration; also potential for it to be gamed by big ag.”

— Interviewee

**Theory of change:** Creating incentives for agricultural climate solutions in climate actions and plans will spur changes in on-farm practices that will generate climate benefits and broader environmental, health, and social justice outcomes. Securing 15 strong cases will provide a critical mass for inspiring other efforts nationally.

**Outcome:** Food and agriculture targets are meaningfully included in Sierra Club’s goals for international climate actions, as well as federal climate planning and at least 15 state, county, and municipal administrative climate action plans.

**Notes on approach:** Develop a toolkit of background information, model language, and template actions. Engage Sierra Club’s climate leads, chapters, and municipal leaders in the Ready for 100 campaign to leverage existing relationships and climate action planning (CAP) work. Advocate for inclusion of these in CAPs at local and state levels around the country. Model food and agriculture content in CAPs that aims to: reduce meat and dairy consumption, support local production of pastured meat from certified responsibly managed ranches and farms, reduce food waste, encourage composting, sequester soil carbon, minimize farm chemical inputs, lower emissions from animal agriculture, and protect agricultural land from development.

**Annual result:** Partners and target locations are identified. Toolkit is created.

**Support urban gardens integrating composting and soil building education, particularly in low-income communities, fostering climate resilience and access to Nature**

**Theory of change:** By engaging and training members of disadvantaged communities in urban gardening and soil building through compost, Sierra Club is activating new constituencies for climate protection and climate justice, at the same time building climate resilience, food sovereignty, and healthy communities, creating new job opportunities, and supporting equity in access to Nature and green space.

**Outcome:** Sierra Club has supported urban agriculture and soil projects in 10 target municipalities (target rationale to be determined).

**Notes on approach:** Partner with leaders in the movement (for example Institute for Local Self-Reliance) and community groups in places with new food waste composting policies to support development and launch of soil builders projects. Build on existing Sierra Club precedent such as the zero waste teams of chapters and the Grassroots Network. Foster literacy and leadership on soils and climate in these communities, and create pathways.
for their voices in policy advocacy. Effort could be led by or in partnership with Nearby Nature.

**Annual result:** 3 pilot local “soil builders” projects launched in partnership with local community groups.

“This field is completely ripe. Compost and climate protection in soil, avoided methane, etc. A lot that happens with solid waste is at the state level, except biosolids. A campaign on this that pulls together state and local level tools could be really powerful.”

— interviewee

“I think that food waste is an important issue and I know polls higher than climate itself. It is bi-partisan. If we could leverage our grassroots and political abilities, we could make a huge impact on reducing food waste, getting edible food out of landfills and into the hands of the hungry and inedible food into compost rather than landfills.”

— survey respondent

**Who is working on closing the carbon cycle? Sample activities of other environmentally oriented NGOs.**

- **Institute for Local Self-Reliance:** ILSR’s Waste to Wealth program helps communities create policies and practices that address citizens’ environmental concerns and economic needs, fight incinerators and landfills, and research and demonstrate recycling, composting, and zero waste programs.

- **Carbon Cycle Institute:** CCI’s Ag Carbon Program advances carbon farming and regenerative rangeland management that builds soil carbon and critical ecosystem services on ranches, farms and working landscapes.

- **Project Drawdown:** Quantifies strategies such as biochar, carbon farming, composting, and grazing management for soil carbon sequestration.

- **Center for Food Safety:** Promotes regenerative agriculture to build soil carbon sequestration.

- **NRDC:** Launching a pilot crop insurance program that would create incentives for cover cropping. A national leader on food waste issues.

- **The Nature Conservancy:** Broad work in land restoration and protection, building soil health for multiple benefits, national and international policy. Engaged in national effort on supply chains and climate, collaborating with Academy for Systemic Change.

- **World Resources Institute:** Food loss and waste protocol.

- **Union of Concerned Scientists:** Promoting local and regional food systems; incentives for farmers to produce more organic, sustainable, and healthy food, especially fruits and vegetables; and a “safety net” of credit and risk management tools to support farmers who adopt sustainable and diversified practices. Advocating for sustainable agriculture and agroecology.

**WORK AREA: RESTORING THE CARBON CYCLE**

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WHAT
Expand low-carbon diets (in particular reducing red meat and cheese) and mobilize people to take action on diet + climate.

RATIONALE
While pushing for substantial production-side changes in the way farm animals are raised (“better meat”) is important, ultimately a reduction in the demand for animal products (“less meat”) is a necessary parallel strategy to fight climate change and mitigate the disastrous impacts of concentrated animal agriculture. Several international assessments of opportunities to mitigate climate change have identified reducing meat consumption as a high-potential leverage point.51

Americans eat a lot of meat. While our consumption of beef per capita has declined in the past few decades, we still consume more than three times the global average.52 Hamburgers are our favorite food—we eat close to 20 billion of them each year. Lamb and beef are the foods with the biggest carbon footprint, followed by pork and cheese.53 Emissions from beef and lamb (per g of protein) are about 250 times those of legumes54 and livestock production is the largest global contributor to methane and N2O emissions.55 Yet, internationally, public awareness of the connection between meat and dairy consumption and climate change is very low.56

A systematic review of the literature on diet and climate change in 2016 showed that shifting from a standard Western diet to more environmentally sustainable diets could achieve significant reductions in greenhouse gas emissions, as well as land use and water use. Specifically, vegan diets yield 45% less emissions, eliminating meat and dairy from ruminants lowers emissions by 33%, and shifting to vegetarian diet reduces emissions by 31% (median values of all studies). Shift to vegetarian and vegan diets also reduce agricultural land use by 50% and 60% respectively.57

While reducing U.S. demand for beef can translate to meaningful reduction in the domestic carbon footprint, it can also address, to some degree, the climate impacts of deforestation associated with beef production in some parts of the world. The U.S. is the world’s largest producer of beef, but as the largest consumer of beef globally, it is also a net importer. Without intervention, the production of beef and pork is expected to increase steadily between 2016 and 2025, driven by lower feed costs and strong demand domestically and abroad.58 The FAO predicts that global meat consumption will nearly double by 2050—so poses additional emissions risk
in the future.59 If current dietary trends continue, by 2050, they “would be a major contributor to an estimated 80 per cent increase in global agricultural greenhouse gas emissions from food production and to global land clearing.”60

“The agricultural land use and greenhouse gas emissions associated with the average American diet were nearly double those associated with the average world diet, with 80 to 90 percent of the impacts from consumption of animal-based foods.”61

It is important to note that reducing the footprint of animal agriculture has substantial food security co-benefits. The Rockefeller Foundation-Lancet Commission on Planetary Health reported that if crops were grown exclusively for human consumption rather than to feed livestock “...enough extra calories would be available to feed an additional 4 billion people.”62

There are strong parallels between the impacts of meat consumption on the environment and public health. Americans consume too much protein (Americans consume an average of 8 oz of meat per day, more than double the recommended maximum intake of 3 oz.) with severe health impacts. Meat- and dairy-heavy Western diets are the leading cause of obesity and non-communicable diseases globally.63

Given this picture, the recommendations below outline interventions for Sierra Club at the intersection of diet and climate. There is strong support internally for this work: 82% of the 250 Sierra Club staff and core volunteers who responded to the survey had moderate or strong support for working to increase the share of vegetables and plant-based protein in our diet. At the same time, 15% had a low level of support for Sierra Club taking this on, more than any other area, suggesting some polarization. While advocating for plant-based diets is tricky territory, it is possible for Sierra Club to make interventions that: do not constitute “telling people what to eat,” do not undermine the rich traditions of meat in the cuisines of many different cultures in America, do not come from a place of privilege, are not likely to undermine the American farmer and their economic livelihood, and do not contribute to a significant rise in less climate-negative but environmentally disastrous meats like industrially produced chicken. The work outlined below aims to reduce consumption of foods with the biggest climate impact while meeting these objectives.

“Be careful not to let the campaign advocate for any particular diet. I even find ‘lower on the food chain’ offensive. In many parts of our country and the world, local food is animal based and healthy. It should not be Sierra Club’s business to recommend dietary choices. One size does not fit all people.”

— survey respondent

“While I recognize there’s an aspect of privilege related to vegetarianism and veganism, I think supporting people who want to eat less meat and dairy is worthwhile, especially if it’s done from a more inclusive framing.”

— survey respondent.

“There seems to be a disconnect between activists caring for the environment and what they consume. I wish there was more emphasis on plant based diet.”

— survey respondent

“Walk your talk. Every SC event that includes food should feature local, sustainable grown food and there should be time allotted (a few
minutes at least) to sharing with attendees both where the food was sourced but also why it was sourced locally.”

— survey respondent

“Stop being so afraid to push a plant-based diet for America. Start there. The meat industry impacts the environment, it is horrifically cruel, it is a profound source of pollution and climate change, and contributes to diabetes and heart disease. There is NO good reason to avoid the issue any more since it is at the heart of social justice, which is the best means by which you will reach all of those people who do care about such things but don’t consider themselves environmental activists.”

— survey respondent

“The Iowa Chapter believes that animals are a key part of sustainable agriculture. Because industrial-scale animal production contributes a large quantity of greenhouse gas emissions, which lead to climate change, some people choose to reduce the amount of meat that they consume as a means to reduce their personal carbon footprint.”

— Iowa Chapter factsheet

THE NUMBERS*

If we successfully reduced Americans’ protein intake to 60 g/person/day primarily by reducing intake of animal protein, per person agricultural GHGs would be halved. TOTAL GHG REDUCTION: 183 MMT CO₂e/year (excluding land use changes), equivalent to taking 39 million passenger vehicles off the road.

*Calculations and source data available on request.

Campaign for less meat and other climate commitments in restaurants, institutional foodservice, and public procurement policy

Theory of change: Increasing the availability of plant-based alternatives and reducing the service of meat in food establishments will lead to reduced meat consumption and encourage cultural shift away from meat over-consumption.

Outcome: Reduce or eliminate red meat from one billion American meals annually through multi-pronged and collaborative campaign.64

Notes on approach: Develop a campaign targeting food service providers at all scales to adopt climate commitments, including (a) reduce meat consumption and food waste by promoting smaller portion sizes; (b) offer plant-based alternatives; and (c) appropriately deal with food waste generated through their operations. Advocate for climate friendly procurement policies and pathways at county and state levels and get public officials to recognize role of reduced purchases of animal foods as a climate mitigation strategy. Create pathways that engage large-scale national foodservice providers and regional and national restaurant chains as well as providing a framework that allows chapters, local Sierra Club groups, and the Sierra Student Coalition to engage outlets in their communities. Engage partnerships in cases where Sierra Club can increase impact (Consider supporting NRDC’s campaign to reduce red meat by 30% in meals served by 3 of 4 top national food service companies, Friends of the Earth and co’s “Better Burger” campaign, and the Real Food Challenge). Consider expanding “Meatless Mondays.”

Annual result: A thoughtful strategy that includes consideration of tactics and targets.

Annual result: A template that can be used by chapters, groups, and others to campaign local food service providers and a framework for supporting efforts and capturing results.

Produce an engagement framework and toolkit to support communities taking self-defined action on diet + climate

Theory of change: “We are likely to modify our own behavior when we participate in problem analysis and solution and likely to carry out decisions we have helped make.” This finding is based on the work of Margaret Mead and Kurt Lewin who authored the definitive study showing the power of involving participants in the research process. During WWII, Mead and Lewin experimented to help reduce Americans’ consumption of rationed foods. In one control group, “[a]n expert nutritionist lectured housewives on what they “should” do – a traditional, reasoned, exhortation to change. In comparison groups, wom-
en were given the facts, studied them, and invited to decide together what to do.” The results clearly showed that groups that reached consensus through discussion changed their food habits much more than those given expert advice.

**Outcome:** 100,000 personal commitments to take action to reduce red meat consumption and engage people in action to further reduce the negative impacts of meat. An engaged public savvy about the ecological and health implications of dietary choices and mobilized to act.

**Notes on approach:** Create, promote, and disseminate an event toolkit (picnic basket) that provides creative and engaging information about diet and climate and guidance for facilitated conversation and action planning using a few incisive questions, for use by groups of all scales—from a group of friends or church group to chapter- and community-events. Offer action ideas and allow people to register decisions made. Build on lessons from the Art of Hosting, which offers powerful methods to create open and meaningful conversations that lead to commitments. Consider working with Food Choice Task Force to adopt “Our Plate, Our Planet” moniker. Consider including messages on equity and inclusion as well as information about becoming a Sierra Club member. Explore what it means to eat the “right” meat, e.g., heritage breeds, production practices, etc.

**Annual result:** Framework up and running. Approach in place after some focus groups and/or prototyping. Outreach strategy launched.

**Communicate creatively about climate + diet**

**Theory of change:** Creating pathways for trusted and diverse messengers and taste-makers to promote healthy and sustainable diets will increase public engagement on the impacts of our food choices and create dietary shifts in the mainstream. While we know that price, convenience, and taste are the primary drivers of dietary choice, we also know that public understanding of connections between climate change and diet is very low and recent research showed that eater awareness about the issues connected with overconsumption of animal products can “help disrupt the cycle of inertia, thereby creating more enabling domestic circumstances and the political space for policy intervention.” In addition, awareness-raising efforts that link diet and climate with local environmental concerns are more likely to influence behavior change.

**Outcome:** Healthy and sustainable diets are considered broadly acceptable and are being promoted by authorities (from health sector but also pop culture, religious and cultural leaders, communities, etc.) and
more widely adopted. More Americans are engaged in fighting CAFOs.

**Notes on approach:** Carefully shift the culture of meat-centered diets through high-profile celebrity actions, communications and public awareness campaigns, and digital strategies. Collaborate with advertising partner(s) like the Ad Council to develop and test careful and creative messages & campaigns on reduced meat consumption and diet and climate. Cultivate the right messengers—prominent, respected, and unlikely celebrities, health leaders and others—and culturally appropriate approaches. Work to de-politicize the issue by engage public health partners like the American Public Health Association and Michigan State Medical Society, which have called for a moratorium on CAFOs, and other leaders like Kaiser Permanente which promotes plant-based diets. Explore opportunity for unusual partnerships, such as with emerging health trends like the bulletproof diet (good potential alignment with soils work as well since focused on gut biome) and the anti-aging trend. Through Sierra Club communications, place compelling articles, blogs, and social media posts both within Club avenues (incl. Climate Parents) and in high-profile mainstream media, and create campaign materials for use in grassroots engagement efforts.

**Annual result:** Identification of messengers on climate and diet cultivated by Sierra Club. Public education materials.

**Who’s working on “sustainable diets”? Sample activities of other environmentally oriented NGOs.**

- **Center for Food Safety:** True Food Network: “Join our more than 800,000 members saying no to industrial agriculture and yes to True Food” and the Cool Foods Campaign: advocate short stack of principles for climate friendly food choices. [Info-graphic]

- **Environmental Working Group:** Published the Meat Eaters’ Guide to Climate Change + Health, promoting “local, sustainable” food, healthy eating, GMOs in foods.

- **Friends of the Earth:** Targeted market and corporate pressure campaigns is major consumer-facing approach—Darden/Olive Garden (industrial meat), grading restaurants on antibiotics, educating consumers, footprinting climate impact of school food, promoting less and better meat (Better Burger Challenge), and climate friendly public procurement policies.

- **NRDC:** “Less Meat, Better Meat”—strong focus on antibiotics in meat (corporate pressure, collaborating with school districts, policy work); less meat on menus in food service industry; new effort on fighting animal factories with legal; former participant in Grasslands Alliance. Major food waste campaign—national PR campaign, work on food date labels, working with municipalities.

- **World Resources Institute:** “Better Buying Lab” to research and scale cutting-edge strategies that enable consumers to choose more sustainable foods.

- **Humane Society of the US:** “The HSUS promotes eating with conscience and embracing the Three Rs—reducing the consumption of meat and other animal-based foods; refining the diet by avoiding products from the worst production systems (e.g., switching to cage-free eggs); and replacing meat and other animal-based foods in the diet with plant-based foods.” They produced the [Guide to a Meat-Free Diet](#).

- Organizations working on groups working on food procurement policy include School Food Focus, Center for Good Food Purchasing, and Real Food Challenge, among others.

### WORK AREA: SUSTAINABLE DIETS

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<tr>
<th>CRITERIA</th>
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WHAT
Engage dialogue, storytelling, and relationship-building, lifting up the voices of those who steward our climate by working the land to mobilize and inspire decision-makers and the public.

RATIONALE
We rely on farmers and ranchers to produce our food and manage almost half of the country’s land base. More farmers, particularly young farmers, now understand that climate change will be a daily reality they have to deal with, and are increasingly on board with being part of the solution. A recent Agri-Pulse poll found that more farmers thought climate change was the single biggest issue facing our country than almost any other issue, scoring it higher than farm bill, immigration and labor, and regulation.50

Many forces and disincentives exist that make it hard for producers to care well for the land and climate. Adding to this, it is anticipated that 70 percent of farmland will change hands in the next 20 years as an aging farm population retires, while aspiring young farmers face serious barriers to entry such as high land prices and access to training. We know we need a broad transformation but what does it take to change how food is grown in this country? What are the experiences of farmers and what stands in their way? How can we best support them? Where can broader food system changes pressure change toward carbon farming? These questions can guide Sierra Club engagement with agriculture as the campaign advances.

Story is a powerful medium for reaching people with messages about change not just in our minds but in our hearts. Connecting urban Americans and public officials—many of whom have little direct relationship with agriculture—with the stories of the people behind the food we eat will compel people to engage further in how their food is grown both as consumers and taking action as citizens. Showing people how to simultaneously be against industrial agriculture while being “pro-agriculture” by showcasing the alternatives can inspire people to act. This work can serve to build a base aligned with and in partnership with local agriculture around the country and in particular lifting up parts of the agricultural economy that have been particularly marginalized.

As Sierra Club considers stepping forward into the food and agriculture space nationally, as discussed above, there have been strong recommendations from social justice allies about engaging in deeply collaborative and authentic ways with affected com-
munities from the beginning rather than coming in with a strong agenda and looking for buy-in. Achieving this necessarily includes listening in the field, building relationships, and understanding how the Sierra Club can best engage levers of change. While the landscape analysis process was a good first step in building the thinking and interests of other leaders into Sierra Club’s program development, ongoing relationship building and listening is needed as the work gets off the ground. This work area proposes a framework for this process work that simultaneously creates tools and messages that can feed into organizing and policy advocacy.

Theory of change: Allying with and supporting farmer movements and worker movements and communities will create a strong collaborative basis for Sierra Club’s long-term work. Helping Americans visualize the role the agriculture community can play in stewarding the climate will help build broad and united rural-urban collaboration for climate protection, resilience, and justice. Unite through care for the land.

Outcomes: Foundational stories for federal and state administrative policy advocacy. Positive messages showing how farmers, ranchers, and laborers can be an effective part of the climate solution. Increased public awareness of how climate solutions—and broader economic and public health and justice—are being undermined by agribusiness consolidation.

Notes on approach: This initiative aims to creatively tell the stories of struggle and success among farm and ranch land stewards, painting a vision of what we could do, how we could get there together, and makes credible business cases for change. It makes space for Sierra Club to deeply listen to the agricultural community and then serve as a conduit of these stories to decision-makers and the broader public. It places emphasis on lifting up disadvantaged segments of the system and ways they are in front on the solutions—new entrant farmers, farmers of color, immigrant farmers, small and medium family farmers, agricultural laborers, and contract farmers. To identify these stories, the initiative can partner with Sierra Club groups and chapters as well as agricultural organizations (where there is interest) such as National Young Farmers Coalition, Rural Coalition, National Black Food and Justice Alliance, National Family Farm Coalition, National Farmers Union, Quivira Coalition, Western Landowners Alliance, Sustainable Rangelands Roundtable, the US Food Sovereignty Alliance, Latino Farmers and Ranchers Association, Northeast Organic Farming Association (and other regional sustainable agriculture organizations), Wild Farm Alliance, and the Land Stewardship Project.

The effort can:
- Showcase visionaries and successes—show that it can be done and how it can be done. E.g., a rancher dissatisfied with the ecological impacts of his/her grazing practices shifts to a new marketing model, raising fewer head more sustainably and making more money;
- Highlight the structural issues that underlie these stories and experiences;
- Connect to messages about food security/climate resilience;
- Engage creative storytelling—collaborating with leading producers, photographers, and other creatives in format and content development;
- Partner with groups and chapters to host events in conjunction with the initiative. But also show up and build relationships where farmers and ranchers are already gathering (and support these gatherings, e.g., regional sustainable agriculture meetings);
- Find a powerful and creative way of pulling the data and stories from those sessions onto the national stage. Ideas: stories with personal accounts and photos, collaboration with high-profile media figure or writer, vlogs, or creative digital strategy;
- Leverage peer influence to drive change;
- Bring public officials out to the field to learn; and
- Create an engaging interface or story map, allowing people to navigate through the stories in a compelling way.

Annual result: A detailed plan of action and list of stories; a short series of initial stories.

Annual result: Sierra Club national ag campaign staff have attended and otherwise supported 3-5
key frontline community-led social justice-focused agricultural gatherings.

Creatively disseminate stories to amplify campaign advocacy efforts

Theory of change: Sharing compelling stories within specific policy advocacy efforts will lead decision-makers to action and help bring together rural and urban communities to build climate protection, resilience, and justice.

Outcome: A strong and diverse urban and rural movement for organic regenerative agriculture.

Notes on approach: The effort can build on the stories to:

- Leverage the broader political moment, highlighting stories about the shortcomings of the Trump administration in meeting the needs of rural America;
- Present a digital interface or related social media effort that allows people to engage the topic, join the conversation, and get involved in related action;
- Build urban-rural connections and mobilize urban support for climate farming;
- Build a network of farmer and rancher messengers on climate and agriculture (mitigation and adaptation), including a cadre of Sierra Club members who are farmers;
- Use stories in educating urban legislators about carbon farming. Help legislators meet agricultural climate stewards;
- Allow Sierra Club to support impactful campaigns led by new partners with deep roots in the work; and
- Promote and support peer-to-peer learning in the agricultural community.

Annual result: Strong and trusting relationships with frontline community groups. Sierra Club supports at least 5 partner campaigns that meet a set of criteria.

Annual result: 5 stories are integrated into broader campaigns for change.

Evolve campaign strategy

Theory of change: Engaging with agricultural allies in a spirit of open inquiry will build deep trust and facilitate internal learning and increased effectiveness (learning organization model).

Outcomes: Identification of additional specific Sierra Club food and agriculture program priorities arising organically from the field. A cadre of agricultural climate champions to engage in an ongoing basis.

Notes on approach: Use the initiative to further develop a strong food and agriculture program that is rooted in authentic relationships and focal points that emerge from the project. Use as invitation to agricultural partners to work with Sierra Club.

Annual result: A revised program strategy.
‘There’s going to be a problem with environmental NGOs in the U.S. getting too much in the direction of telling farmers what to do. You have to figure out a way to say what’s important from a climate point of view, really necessary, but say it in a way that doesn’t appear it’s a bunch of city people telling farmers what to do.’

— interviewee

‘It’s vitally important to me for Sierra Club to build a rural capacity just like it’s vital for the Democratic party to build capacity to talk to rural Americans. To not have Sierra Club ram something down the throat of rural America that it doesn’t like the taste of.’

— internal interviewee

‘Showing the common interest between farmers and environmentalists/consumers would be really good. Show common cause and whittle away at adversarial framing.’

— interviewee

‘The challenge of next 2-4 years will be to demonstrate the cynicism and hypocrisy of the new administration to the electorate so that we won’t have to go through four more years. To create a wedge between the electorate that thinks they will get support from this administration on things like economic inequality and reduction in cronyism; all these things will be huge disappointments. Food is one of the ways we can do that.’

— interviewee

**WORK AREA: RURAL AMERICA DIALOGUES**

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**INTERNAL CAPACITY BUILDING AND PROGRAM DEVELOPMENT**

In addition to recommendations on program content, the following are suggestions for internal capacity building on food and agriculture that would support a successful campaign.

**Outcome:** The agriculture and food campaign is a functioning and well-integrated national campaign within Sierra Club with long-term aspirations.

**Annual result:** Food and agriculture is developed as a capacity of organizational leaders via written materials, internal trainings, and discussion to advance food and agriculture climate solutions in messaging and existing advocacy work.

**Annual result:** “Backbone” infrastructure is in place, facilitating pan-organization strategic planning and collaboration on agriculture-related work areas (e.g., CAFOs, GMOs, pollinators, grazing) among volunteers and staff at all levels (national, chapters, groups and grassroots network).

**Annual result:** A series of interactive webinars—part educational, part strategic action planning—on strategic topics (e.g., tackling state Right to Farm laws, building state incentives for composting) for volunteers and staff across the organization.

**Annual result:** Funding mechanism and seed funding in place to kickstart high-priority chapter activities.

**Annual result:** A leadership team of agricultural advisors is established that includes leading ecological farmer- and rancher-members of Sierra Club, representing various scales of operation and with specific representation from small and family farmers, beginning and new entrant farmers, immigrant farmers, African-American farmers and other farmers of color, and ag labor.

**Annual result:** A Sierra Club food and agriculture public presence (web home, etc.) has been launched.

**Annual result:** Sierra Club establishes itself as an able partner on agriculture as it relates to climate, the environment and social justice.
HOW WOULD THE FOOD AND AGRICULTURE CAMPAIGN SYNERGIZE WITH EXISTING SIERRA CLUB WORK?

A national food and agriculture campaign would overlap with several other Sierra Club campaigns, programs, and capacities. Below are potential actions or frames that could be adopted to articulate the link between the two:

- **POLLINATORS**: Many of the farming practices that the food and ag campaign will advocate for will benefit pollinators, e.g., cover cropping, planting wild edges, reducing agricultural chemicals, combating GMOs, promoting biodiversity. A Sierra Club pollinator protection campaign could be housed in the food and agriculture campaign, and/or some of the proposed work of the campaign could be framed, where helpful, through a pollinator protection lens. Campaign efforts to provide a backbone for chapter efforts could include stand-alone efforts on topics like pollinators.

- **ETHANOL**: An area of natural collaboration and synergy between energy and agriculture efforts within Sierra Club. The food and agriculture campaign can supply agroecology allies to speak on community impacts of corn ethanol as part of messaging and grassroots mobilizing to curtail ethanol production.

- **DIGITAL**: SierraRise could play a key role in organizing — in helping develop, test and implement distributed organizing and online-to-offline engagement. There will also be many opportunities for petition-style AddUp campaigns through the food and agriculture work.

- **LEGAL**: The Environmental Law Program will be a critical capacity of the food and agriculture strategy, particularly on meat supply chains.

- **DEMOCRACY PROGRAM**: Potential synergies via “money in politics” frame. Food and agriculture effort would campaign against consolidation of control and influence in agri-food sector and could benefit from democracy expertise within the organization.

- **READY FOR 100**: Ready for 100 campaigners have formed strong relationships with municipalities, counties, and other leaders on clean energy. These relationships could be used to advance food and agriculture elements in climate action plans.

- **OUR WILD AMERICA**: OWA and the Food and Agriculture Campaign could collaborate on incentivizing well managed ranching, for example connecting members to beef from ranches that protect wolves and grizzly bears, not culling Yellowstone bison that leave the park, and are good stewards of our natural heritage of rivers and streams, salmon and trout.

- **Nearby Nature**: Building on the program’s urban gardening work (as well as urban gardening work of chapters), Nearby Nature could serve as the anchor for collaborative work supporting “soil builders” as outlined in the second work area (closing the carbon cycle) above.
Outings: While not a formal part of the recommendations in this report, it could be beneficial to pilot food and agriculture-related outings—e.g., tours of regenerative agriculture projects or food forests. This could include, for example, local volunteer-led programs, a high-profile farmer-veteran themed outing, or Inspiring Connections Outdoors urban-to-farm school outings.

• CLIMATE PARENTS: The food and agriculture campaign and Climate Parents are natural collaborators. Using food as a frame to mobilize parents can drive the climate issue home the way no other issue can. Knowing that our kids’ food supply will be increasingly threatened by climate change and also understanding that what we feed our kids has an impact on both climate and health is likely to hit home with parents and develop new climate champions. In addition, the connection between soil health and the nutritional content of food could be a good gateway to agriculture issues. Climate Parents could serve as a core capacity for food and agriculture campaigning, broadening the reach of movement building and mobilizing efforts. Imagine PTA groups or even individual parents given the tools to help their kid’s school provide healthier and climate-friendly cafeteria options.

• TRADE: Bilateral and multilateral trade deals are a key mechanism that has undermined local control of food and farming as well as having major impacts on food security and the viability of farms around the world. The food and ag campaign could mobilize more people to take action on Sierra Club’s trade campaigns potentially using 501(h) funding.

• BEYONDS: As we make strides in reducing carbon emissions from fossil fuels, it makes sense to turn to new high leverage opportunities to reduce domestic climate emissions—agriculture is a natural next step: advocating for agroecological practices that both reduce fossil fuel use in agriculture (including use of natural gas for fertilizer production), reduce broader emissions, and enhance ag-
The “Beyond” fossil fuel campaigns and the food and agriculture campaign can be framed as an integrated strategy.

**LABOR PROGRAM:** There is potential to collaborate on strategy and solutions that ally with agricultural and food chain labor as part of the broader climate movement. Trump’s agenda that hurts undocumented workers and food chain worker rights will present opportunities for natural collaboration between food & agriculture and labor & economic rights advocates.

**GRASSROOTS NETWORK:** The food and agriculture campaign can offer grassroots network teams additional strategic input, strategy coordination, and platforms for bigger action. Campaign efforts should integrate and build on the work of related grassroots teams.

- Agriculture and Food: This emerging team could play a strong role in the campaign, particularly mobilizing support for federal farm policy (a proposed priority in the team).
- Sewage Sludge: Team efforts to eliminate the spreading of sewage sludge on agricultural fields can tie in nicely with the soil health work proposed in the recommendations.
- Genetic Engineering: Team efforts to fight GMOs, next-generation technologies, and corporate controlled seed supply align well with proposed campaign work areas.
- Zero Waste: The “Zero Hunger Zero Waste” food campaign of National Zero Waste Team has 3 goals: 1) An educational campaign to promote reduction of food waste in all sectors 2) To promote the collection of still usable food and redistribution to feed the hungry 3) To phase food scraps out of landfills and into compost. This focus is a perfect tie in to work proposed in the “closing the carbon loop” work area.
- Grazing: The Grazing Team and chapter grazing committees could collaborate on campaigning for more meat from certified well-managed grazing operations. This community may also be interested in mobilizing on campaign efforts to reduce meat consumption and support market differentiation of meat from well-grazed animals.
- Vegan: Possible leadership on sustainable diets work area.
- Other teams: Other food and agriculture related teams (fisheries management, meat-free Monday campaign, national water sentinels, zero waste—community responsibility, zero waste—producer responsibility) should be engaged to explore synergies with a food and agriculture campaign.

**FORESTS WORK:** The Forest Volunteer Network may be a good group to mobilize given its expertise on soil health. The campaign may have discrete activities that cover forests as well as agricultural lands.

**SIERRA STUDENT COALITION:** The Coalition can serve as an added capacity for the campaign, in particular the recommended work on sustainable diets and food waste.

**WATER SENTINELS:** Several chapters have Water Sentinels committees and there is a National Water Sentinels grassroots team. The campaign’s CAFO work proposes to include Water Sentinels in collaborative planning and action.
CONCLUSION

This report lays out four key work areas that, together with the broader recommendations, make up a framework for a national Sierra Club Food and Agriculture Campaign. The proposed work areas are interconnected and synergize with each other in important ways. At its heart, the proposal takes a systemic approach, focusing on the root causes of multiple crises—from climate and ecosystem health to jobs, human health and environmental justice. It integrates a sustainable diets strategy with the expected result of our animal agriculture reform strategy which should lead to lower quantities of better quality meat in the marketplace.

In addition to addressing the animal-related impacts, the proposed activities also position Sierra Club to take advantage of increased interest in agricultural soil carbon sequestration to build a bigger movement for agricultural drawdown, leverage deeper transformation of the food and agriculture system for broader benefits, and secure more equitable subsidies for traditionally marginalized farmers and ranchers.

Finally, the recommendations propose collaborating with agricultural climate stewards to inspire a broad movement for a sustainable and socially just food production system.

Together, the recommendations endeavor to hold true to Sierra Club’s identity and legacy while being responsive to a changing world and emerging lessons about change making. They align with the landscape analysis guiding criteria as well as Sierra Club’s agricultural policies, and are designed to leverage existing great work Sierra Club is doing, build strong relationships and trust with potential partners on the frontlines of food and agriculture struggles, secure some early wins, and honor the specifics of place and local knowledge while building a strong national narrative and strategy.

As Sierra Club considers advancing a new campaign on food and agriculture, consider the experience of interviewee Gabe Brown, a North Dakota farmer of 5,000 acres of livestock and crops and a climate steward, an example of what is possible when you set your mind to doing things right:

“What makes us different is we have been 100% zero-till since 1994. We’re known for not using any synthetic fertilizers since 2007, no fungicides or pesticides since before the turn of century. We do use some herbicide since we refuse to till the soil, but we only do one pass every 2 years. We greatly reduced our fossil fuel inputs where we’ve truly been able to regenerate our soils. Native rangeland in this area historically was around 7% organic matter. When we bought this farm in 1991, we were at less than 2%. We have been able to regenerate to where we’re now at 6-7%. We’re not quite at pre-European settlement levels but we’re close. In 1991, NRCS did some baseline soils work here and found we could only infiltrate 0.5 inches of rain per hour. We can now infiltrate an inch of water in 9 seconds. It’s not how much rainfall you get, it’s how much you can infiltrate in the soil and hold via organic matter.

The beauty of what I do is, when you heal your ecosystem, you build resiliency into it. I can hold 10 times more water per acre in the soil. The temperature and climate swings don’t affect me as much as our neighbors. Right now, we have a cover crop and a cash crop going, the soils are still moist. The neighbor who just grew wheat has powder dry soils. Even though the climate is changing some, it’s not going to affect me near as much as everybody else.”
APPENDIX

LANDSCAPE ANALYSIS METHODOLOGY: ACTIVITIES

(Refer to Chapter 1 for overview of approach)

DATA COLLECTION PHASE

• 26 internal interviews (list of interviewees below). Semi-structured interviews representing a cross-section of the organization, including: Board; national executive and campaign staff; representatives from communications, digital, policy, and legal; chapter staff; volunteers (including grassroots network); and select additional staff. Interviewees also represented various geographies, both rural and urban perspectives, and a range of engagement on food and agriculture issues.

• 61 external interviews covering production agriculture, agricultural and food system workers, supply chain, environmental and conservation advocates, philanthropy, science and academia, climate justice, food sovereignty, social justice, food and agriculture policy, legal strategy, and media and reporting.

• Online survey of Sierra Club staff and volunteers (September 2016). The survey was disseminated via the following listserves: Sierra Club Board, CCL delegates, CCL chapter chairs, all staff, food and ag task force, and chapter conservation chairs. 250 responses were received.

• Input sessions
  ○ Council of Club Leaders: elected representatives from each of the Sierra Club’s 63 chapters (September 9, 2016). Two 1-hour groups with 10 participants in each.
    ■ Breakout 1: Richard Gill (Hoosier Chapter); Stephanie Morris (Kentucky Chapter); John Bookster (Rio Grande); Carrie Hearn (Oregon Chapter); Ara Marderosian (Kern-Kaweah Chapter); Phil Hearn (Ohio Chapter); Jennifer Johnson (Missouri Chapter); Jonathan Bond (Vermont Chapter); Don Hammis (John Muir Chapter); Tom Morris (Cumberland Chapter)
  ■ Breakout 2: Becky English (Rocky Mountain Chapter); Keith Bagwell (Grand Canyon Chapter); Marcurius Byrd (South Carolina Chapter); Tyler Mainquist (Nebraska Chapter); Edwin Montalvo Ramirez (Puerto Rico); Dave Emory (GA); Tom Roth (Redwood Chapter); Gwyn Jones (Sierra Grassroots Network); Kate Bartholomew (Atlantic Chapter, NY); Kate Lincoln (Washington State); Scott Elkins, Director of Grassroots Effectiveness.

  ○ Sierra Club Foundation Board (September 15, 2016).

  • Invitational meeting for DC staff (October 25, 2016). Participants: Emily Pomilio, Associate Press Secretary, Beyond Coal; Richie Ackerman, Sr. Advancement Director, East; Brian Dockstader, Director of Digital Innovation; Courtney Hight, Director, Democracy Program; Adam Kapp, Director, Digital Product Management.

• Research
  ○ Literature review
  ○ Review of Sierra Club chapter websites

• Input sought via email on Sierra Club food & agriculture work from chapter agriculture chairs and chapter leads on confined animal feeding, grazing, and GMOs.

DATA ANALYSIS & STRATEGY DEVELOPMENT

• Information from the data collection phase was processed and summarized

• Preliminary theory of change, campaign objectives and approaches were developed and filtered through guiding criteria

• Climate benefits of various outcomes were quantified

• Candidate campaign ideas were drafted

VETTING

• Campaign framework vetted through the following activities:
  • 1/2-day workshop with cross-section of 10 Sierra Club staff and volunteers. December 5, 2016.
• 2016 Colloquium session, Santa Fe, NM. December 8, 2016. Breakout session with 30 participants from chapter leadership.
• Agriculture and food grassroots team conference call. January 10, 2017.
• Second round of consultation with select internal and external advisors
• Survey of chapters to vet specific activities

FINAL RECOMMENDATIONS
• Compilation of Sierra Club food/ag “footprint” (past and existing work on food and agriculture)
• Drafted program proposals in Managing for Results format
• Internal review (10 invited reviewers)
• External review (4 reviewers)

INTERVIEWS CONDUCTED FOR THE SIERRA CLUB FOOD AND AGRICULTURE LANDSCAPE ANALYSIS

<table>
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<tr>
<th>NAME</th>
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<tbody>
<tr>
<td>Alexander Rony</td>
<td>Senior Digital Innovation Campaigner</td>
</tr>
<tr>
<td>Bruce Hamilton</td>
<td>Deputy Executive Director</td>
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<td>Donna Buell</td>
<td>Former member, Sierra Club Board of Directors</td>
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<td>Gail Philbin</td>
<td>Director, Michigan Chapter</td>
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<td>Hank Graddy</td>
<td>Water Chair, Cumberland Chapter</td>
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<td>Henry Holmes</td>
<td>Grants and Compliance Director, Sierra Club Foundation</td>
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<td>Hop Hopkins</td>
<td>Director of Strategic Partnerships</td>
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<td>Jackie Ostfeld</td>
<td>Director, Nearby Nature</td>
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<td>Jason Mark</td>
<td>SIERRA Editor in Chief</td>
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<td>Jen Hensley</td>
<td>State Lobbying Advocacy Director (Illinois)</td>
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<tr>
<td>Jodie Van Horn</td>
<td>Director, Ready for 100 Campaign</td>
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<tr>
<td>John Coequyt</td>
<td>Director, Federal and International Climate Campaigns</td>
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<tr>
<td>Joshua Noga</td>
<td>Conservation Coordinator, Hawai‘i</td>
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<tr>
<td>Kim Kohl</td>
<td>Sr. Director Research and Analysis, Beyond Coal</td>
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<tr>
<td>Laurin Asdal</td>
<td>Chief Advancement Officer, Major Gifts</td>
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<tr>
<td>Lisa Hoyos</td>
<td>Director, Climate Parents</td>
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<tr>
<td>Liz Perera</td>
<td>Climate Policy Director, Federal Policy</td>
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<tr>
<td>Lynn Henning</td>
<td>Former MI volunteer and Goldman Award winner</td>
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<tr>
<td>Melinda Pierce</td>
<td>Legislative Director</td>
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<td>Michael Bosse</td>
<td>Deputy National Program Director</td>
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<td>Mike Brune</td>
<td>Executive Director</td>
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<tr>
<td>Pat Gallagher</td>
<td>Conservation Law Program Director</td>
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<td>Sarah Hodgdon</td>
<td>National Program Director</td>
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<tr>
<td>Sarah K. Friedman</td>
<td>Senior Campaign Representative, Beyond Coal Campaign</td>
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<tr>
<td>Steve Ma</td>
<td>Sierra Club Board</td>
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<tr>
<td>Victoria Brandon</td>
<td>Food and Agriculture Task Force Member; Co-Chair, Grassroots Agriculture and Food Team</td>
</tr>
<tr>
<td>Vrinda Manglik</td>
<td>Campaign Representative, International Climate and Energy Campaign</td>
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External Interviews

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<tr>
<th>NAME</th>
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<tbody>
<tr>
<td>Alex Funk</td>
<td>Staff Attorney</td>
<td>National Young Farmers Coalition</td>
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<tr>
<td>Andrew Kang Bartlett</td>
<td>Presbyterian Hunger Program</td>
<td>Presbyterian Church</td>
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<tr>
<td>Angela Adrar</td>
<td>Executive Director</td>
<td>Climate Justice Alliance</td>
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<tr>
<td>Anna Lappe</td>
<td>Executive Director</td>
<td>Small Planet Institute</td>
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<tr>
<td>Barry Lynn</td>
<td>Director, Open Markets Program</td>
<td>New America Foundation</td>
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<tr>
<td>Bill McKibben</td>
<td>Sr Advisor</td>
<td>350.org</td>
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<tr>
<td>Bob Martin</td>
<td>Director, Food System Policy</td>
<td>Johns Hopkins Center for a Livable Future</td>
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<tr>
<td>Bob Scowcroft</td>
<td>Former Executive Director</td>
<td>Organic Farming Research Foundation</td>
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<tr>
<td>Brenda Platt</td>
<td>Co-Director</td>
<td>Institute for Local Self-Reliance</td>
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<tr>
<td>Brent Newell</td>
<td>Sr. Attorney</td>
<td>Center on Race, Poverty and the Environment</td>
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<tr>
<td>Calla Rose Ostrander</td>
<td>Climate Change Innovations Advisor</td>
<td>King Foundation, Rathmann Family Foundation</td>
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<tr>
<td>Dan Imhoff</td>
<td>Co-Founder</td>
<td>Watershed Media</td>
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<tr>
<td>Debbie Reed</td>
<td>Executive Director</td>
<td>C-AGG</td>
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<tr>
<td>Doug Boucher</td>
<td>Sr. Adviser, Climate and Energy</td>
<td>Union of Concerned Scientists</td>
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<tr>
<td>Eric Olson</td>
<td>Sr Strategic Director for Health and Food</td>
<td>NRDC</td>
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<tr>
<td>Ferd Hoefner</td>
<td>Policy Director</td>
<td>National Sustainable Agriculture Coalition</td>
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<tr>
<td>Fred Kirschenmann</td>
<td>Distinguished Fellow</td>
<td>Leopold Center for Sustainable Agriculture, Iowa State U</td>
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<tr>
<td>Gabe Brown</td>
<td>Farmer</td>
<td>Brown’s Ranch</td>
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<tr>
<td>Hal Hamilton</td>
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<td>Sustainable Food Lab</td>
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<td>Helena Norberg-Hodge</td>
<td>Executive Director</td>
<td>International Society for Ecology and Culture</td>
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<tr>
<td>Janaki Jagannath</td>
<td>Coordinator</td>
<td>Community Agroecology Network</td>
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<td>John Fisk</td>
<td>Executive Director</td>
<td>Winrock</td>
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<tr>
<td>Jose Oliva</td>
<td>Co-Director</td>
<td>Food Chain Workers Alliance</td>
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<tr>
<td>Joseph McIntyre</td>
<td>Executive Director</td>
<td>Ag Innovations</td>
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<tr>
<td>Karen Bouris</td>
<td>Executive Director, Environmental Initiatives</td>
<td>Food Choice Task Force</td>
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<td>Kari Hamerschlag</td>
<td>Standing Food and Technology Program Director</td>
<td>Friends of the Earth</td>
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<td>Kathy Ruhrf</td>
<td>Sr Program Director</td>
<td>Land for Good</td>
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<td>Ken Cook</td>
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<td>Kevin Bayuk</td>
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<td>Lauren Gwin</td>
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<td>Center for Small Farms and Community Food Systems</td>
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<td>Lorette Picciano</td>
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<td>Marco Ugarte</td>
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<td>Mark Bittman</td>
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<td>Michael Abelman</td>
<td>Farmer, Author</td>
<td>Foxglove Farm</td>
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<tr>
<td>Michael Dimock</td>
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<td>Roots of Change</td>
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<tr>
<td>Mike Hamm</td>
<td>Sr. Fellow</td>
<td>Centre for Sustainable Food Systems at Michigan State University</td>
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<tr>
<td>Monique Mikhail</td>
<td>Sr. Food and Agriculture Strategist</td>
<td>Greenpeace</td>
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<tr>
<td>Naomi Starkman</td>
<td>Editor, Founder</td>
<td>Civil Eats</td>
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<td>Navina Khanna</td>
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<tr>
<td>Nikki Silvestri</td>
<td>Principal</td>
<td>Silvestri Strategies</td>
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<td>Nora Goldstein</td>
<td>Editor</td>
<td>Biocycle</td>
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<td>Oran Hesterman</td>
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<td>Fair Food Network</td>
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<tr>
<td>Patty Lovera</td>
<td>Assistant Director</td>
<td>Food and Water Watch</td>
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External Interviews, con’t.

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<tr>
<td>Pelayo Alvarez</td>
<td>Director, Outreach and Partnerships</td>
<td>Carbon Cycle Institute</td>
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<tr>
<td>Peter Lehner (with Alexis Andeman, Tyler Smith)</td>
<td>Sr. Attorney, Sustainable Food/Agriculture Program</td>
<td>Earthjustice</td>
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<tr>
<td>Rebecca Spector</td>
<td>West Coast Director</td>
<td>Center for Food Safety</td>
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<td>Renata Brillinger</td>
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<td>Ricardo Salvador</td>
<td>Director, Food and Agriculture</td>
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<td>Sarah Bell</td>
<td>Program Director</td>
<td>11th Hour Project</td>
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<td>Sarah Vared</td>
<td>Interim Executive Director</td>
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<td>Saulo Araujo</td>
<td>Director, Global Movements</td>
<td>Why Hunger/US Food Sovereignty Alliance</td>
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<td>Scott Cullen</td>
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<td>Scott Dye</td>
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<td>Steve McCormick</td>
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<td>Earth Genome</td>
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<td>Sujatha Jahagirdar Bergen</td>
<td>Sustainable Livestock Advocate</td>
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<td>Susan Clark</td>
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<td>Tara Garnett</td>
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<td>Tom Philpott</td>
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<td>Mother Jones</td>
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<td>Torri Estrada</td>
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<td>Trathen Heckman</td>
<td>Executive Director</td>
<td>Daily Acts</td>
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<tr>
<td>Walt Reid</td>
<td>Director, Conservation and Science Program</td>
<td>Packard Foundation</td>
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Additional input was provided by Jeff and Louisa Barnum, Becca Bartholomew, Sujatha Bergen, Karen Bouris, Ellie Cohen, Tracy Delaney, Marcia DeLonge, Jonathan Gelbard, Ariel Greenwood, Aaron Isherwood, Reggie Knox, Lorenzo Macaluso, Michelle Mascarenhas, Helena Norberg-Hodge, Antonio Román-Alcalá, Ella Saltmarshe, Abby Schlageter, David Sibbet, Bill Weihl, Gisela Wendling, and Adam Wolpert, as well as members of the Sierra Club Grazing Team, the Agriculture and Food Team, and many Chapter staff and others at the 2016 Colloquium in Santa Fe, New Mexico.
ENDNOTES

1. Sierra Club’s Food and Agriculture Policy is available at http://www.sierraclub.org/energy/agriculture
4. Chambers et al., op cit.
15. Ibid.
18. Chambers et al., op cit.
20. Weber and Matthews, op cit
28. Ibid.
In spite of this, Sierra Club staff and volunteers who responded to the survey ranked soil carbon sequestration much lower than emissions from crop and animal agriculture and carbon farming ranked lowest in support for a range of solution areas (and highest in uncertainty), suggesting that internal awareness-raising is needed.

U.S. Energy Information Administration. (op. cit.)


Recently, Sierra Club proposed some work to redesign federal and private land conservation programs, such as conservation and wetland reserves, to provide permanent terrestrial carbon sequestration, with strong economic penalties for carbon emissions resulting from withdrawals of lands from these programs.


See for example West Coast Climate and Materials Management Forum climate action plan templates: http://westcoastclimateforum.com/toolkit/caps

See also ILSR Neighborhood Soil Rebuilders Composter Training Program at https://ilsr.org/neighborhoodsoilrebuilders/


Silvestri Strategies. Food and Development Policy in partnership with the Carbon Cycle Institute and Silvestri Strategies.


Assuming beef, this would equate to approximately 5% of US production, taking 1.5 million cows “off the road.” Assuming 4 oz per serving. For reference: Americans eat 10 billion burgers each year. There are 30 million beef cows in USA (14.7 bn lbs). =58.8 bn meals. =1.2 bn kg CO₂e. = 1.2 MMT CO₂e. Note that carbon footprint of replacement food would reduce the climate benefit to some degree.

See for example Activation Dinners at whatifidoabouttrump.com.

The Art of Hosting website describes the approach as: “Working with a range of collaborative methods – like Circle, World Café, Appreciative Inquiry, Open Space Technology, ProAction Café, storytelling and more – practitioners can tailor the approach to their context and purpose. The Art of Hosting Conversations That Matter takes into account the whole process – all the preparations before the participants come together, what happens while they are working together, and how the results of their conversation – the ‘harvest’ – support next steps that are coherent for their purpose and context.”


