Design for Climate Action
LA 410/510
3.3.2020

CITY OF SILVERTON CLIMATE ACTION PLAN
FOOD AND AGRICULTURE FINAL REPORT

Silverton Famers Market
Silverton | OR | 5.10.18
Silverton Farmer's
Market Facebook Page

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Project Description

For the past two months, this course has consisted of revising the Silverton Energy Plan presented by Sustainable Silverton in June of 2019. Our group focused on food and agriculture and we have spent the term reviewing the goals and strategies provided in the energy plan and strategizing a framework to make these goals a possible future for the city of Silverton. We have condensed the food and agriculture action plan into three goals, each with specific actions and strategies for implementation. Each strategy answers the questions of who, what, when and why. Our work will be presented to Sustainable Silverton in hopes to provide a realistic and successful action plan that will allow the community to practice sustainable living by having a stronger connection with the local food and agriculture production.

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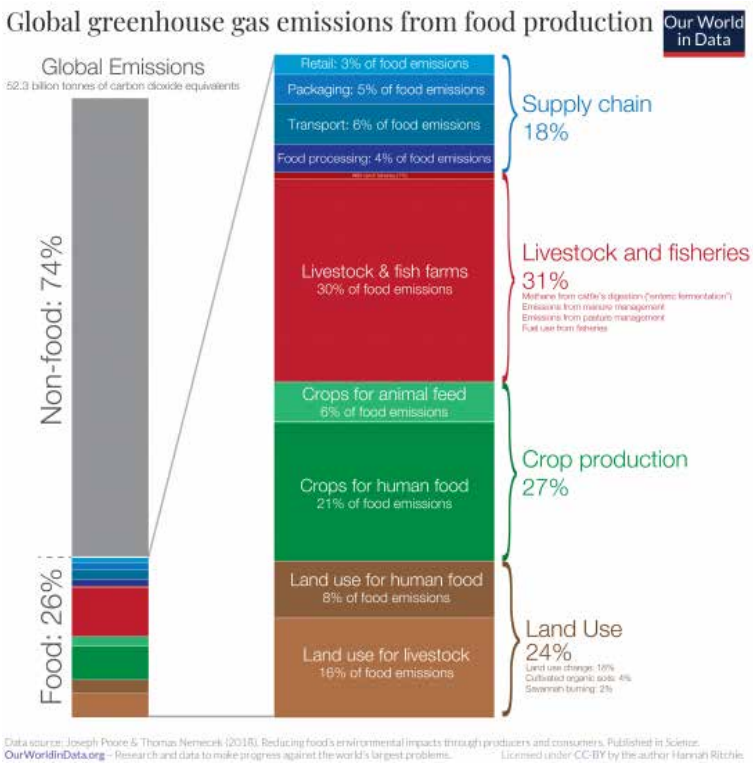
Background and Research

Food and Agriculture includes everything related to our food production, delivery and distribution. It can also relate to local food distribution networks that support low income people or people with restricted mobility, and that divert food from the waste stream. Changing physical conditions due to climate change will continue to intensify which will require a shift in food consumption and modifying agricultural practices to adapt to weather, pests, weeds, and water availability. As a result, local food production may change due to changing availability or cost of food transported into the community from elsewhere. The city of Portland is addressing these issues by implementing a 5-year priority to promoting the consumption of local-low carbon food and supporting community-based food systems (CAP 2015:25). Benefits of consuming food that is grown closer to home includes producing fewer transportation emissions, saving energy that is used for storage and refrigeration, and supporting local farmers/food processors. The distance food travels from production to consumer makes up about 5% percent of the foods carbon emissions. How the food is grown makes up roughly 68%. Food production emissions consist of carbon dioxide (CO2), nitrous oxide (NO2), and methane (CH4). (Poore & Nemecek 2018). It is crucial to highlight that what food is produced and how it is produced makes a much greater impact on GHG emissions than the transportation of importing food into the community, but both should still be addressed since an effective climate plan will take advantage of all possible mitigation strategies.

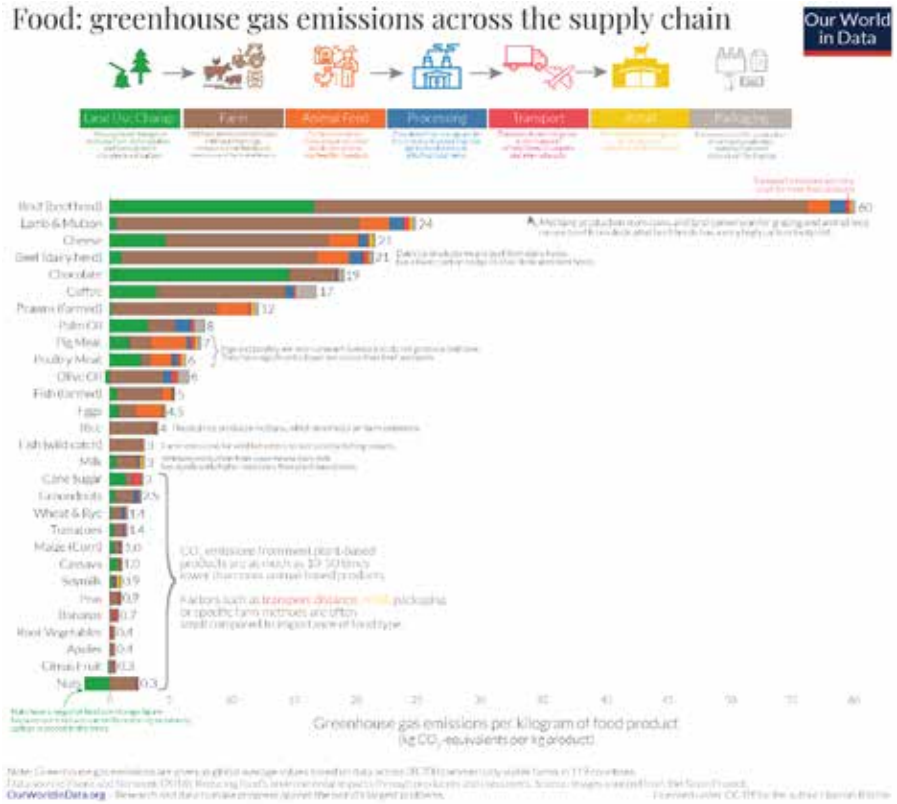
Global Greenhouse Gas Emissions from Food Productions



Background and Research

In general, what you eat and how it is grown matters more than where the food is grown since some plant crops produce more emissions and require more fertilizers than others. The average diet in America is composed of 56.6% meat intake, 18.3% dairy intake, 5.9% beverages, 5.8% seafood, 2.8% eggs, 2.6% vegetables, 2.1% grains, 1.6% fruits, and 4.3% of other food sources (Center for Sustainable Systems 2019). A general shift in food consumption toward an increasingly plant-based diet can reduce GHG emissions generated by the meat and dairy sectors, since pastoral farming causes significantly more GHG emissions than plant-based agriculture. Table 2 (see below) breaks down the GHG emissions of common foods consumed by measuring land use change, agricultural methods, processing, transport, retail, and packaging. The promotion of serving low-carbon food at home, restaurants, and school cafeterias can substantially reduce the GHG of Silverton. A vegetarian diet greatly reduces an individual's carbon footprint but switching to less carbon intensive meats can have a major impact as well.

Greenhouse Gas emissions of common foods



Supporting farmers who engage in no-till or reduced-till agriculture strategies may provide a carbon sequestration opportunity; these methods are concerned with the health of the soil, since soil with high mycelial (fungi hyphae) network activity and soil covered with organic material such as compost and cover crops sequester more carbon than agricultural practices that rely on heavy tilling, and pesticide/herbicide use. Organic agriculture

promotes the amount of organic contents in soil which pesticides can reduce, so supporting organic farming can have long-term carbon sequestering potential (Boswell 2011:143). In a resource-constrained world, local agriculture could focus on feeding the local community as a priority. Silverton has an active group of local CSA growers who sponsor a weekly farmers market. They affiliate with local organizations to try to establish a permanent Co-Op grocery in Silverton. Modeling after climate change initiatives in Corvallis (Corvallis Sustainability Coalition 2015:25), providing city support to the local food co-op will make it easier for regional farmers to connect with local institutions such as the school district, the hospital, restaurants, and grocery stores.

Severe climate events could impact the local food supply, which may impact disadvantaged community members disproportionately. The priority hazard mitigation for Silverton includes a flood update to the Silverton Flood Insurance Rate Maps; an update to the dam breech inundation scenario map; a seismic evaluation of Silver Creek Dam and Silverton water supply reservoir; an evacuation strategy for both local and regional dam failure scenarios; and lastly a seismic evaluation of West C and Main Street bridges over Silver Creek (Marion County Emergency Management 2016:i-10). None of these actions areas directly address food and agriculture, but their hazard mitigations are still related to food and agriculture. Any community gardens, demonstrations gardens, supermarkets, and food co-ops will need to be evaluated to see if they fall in flood zones, are at risk of a dam breech, or are vulnerable to seismic activity. In the case of an emergency or disaster it is important to ensure that food providing avenues are not directly situated in high risk locations or are not greatly impacted by climate disaster, so these businesses and organizations can be prepared to address community food concerns.

Regarding food awareness, community educational efforts will need to address how to procure food in both short-term and long-term disaster scenarios. Promoting local food systems will improve resilience because if roads out of town are blocked, there should be enough food in the local food supply to support the community temporarily. Expanding edible landscapes in businesses, city areas, schools, and residential areas can also improve resilience in the case if roads are blocked to get food supplies out of town. A town in the U.K., Tod Morden, has a unique approach to community gardening, but planting edible food all over the city which promoted community well-being, income from EcoTourism, and a decrease in vandalism. (Warhurst 2012). This approach could increase visitors to Silverton's downtown area, engage the community about food awareness, and align city development with a vision based on sustainability. Since Silverton calls itself a "Garden City", so promoting community-based gardening would make this claim relevant. Currently there are not many operating community gardens in Silverton, so modeling after the City of Denton sustainability plan, they have a population of 136,000 (approx.) and they currently have 5 acres, which will increase to 10 acres in 10 years (Sustainable Denton 2012:52). The City of Silverton need at

Background and Research

least half an acre of community gardening as soon as possible and by 2030 have at least 1 acre of community garden space (possibly more depending on population trends).

Eco-Health Browser: Public Health Linkages to Ecosystem Services

There are also co-benefits from promoting community gardens [See Table 3 (EPA 2019; Putnam 2000; Louv 2005; Wilson 1984)] that can support community livability and provide increased food security to some community members, and from local agricultural practices that generally improve the environment. Not only will this improve community wellbeing and health while supporting equity in the city, it will also promote eating locally which will reduce greenhouse gasses from transporting food. Obstacles have been money, water access, land access, and needing raised beds to minimize worry about soil contamination.

Silverton Farmers Market

Vision Statement

The City of Silverton embraces and fulfills its identity as "Oregon's Garden City" by meaningfully connecting and incorporating regional agriculture within the community.

Goals

The action framework for food and agriculture begins with three goals, each working to categorize and specify the strategies and actions that are provided in the Silverton Energy Plan. Each goal is intentionally broad and are defined by specific strategies and actions.

One | Increase Local Food Purchasing

Two | Increase Food Awareness Within Community

Three | Implement Local Food System for Community

Goal One Increase Local Food Purchasing

Strategy One Localize School Food in the Silver Falls School District

Actions

- Cancel the food service contract with Sodexo
- Serve low carbon food option in the cafeterias of the entire school district
- Participate in the Oregon farm to school grant program
- Switch to using milk dispensers & reusable utensils at every school to reduce waste
- Make food free for every child
- Allow food carts at high school

Goal One
Strategy One
Specifications

Why Localize? Food grown closer to home produces fewer transportation emissions, saves on energy that is used for storage and refrigeration, and supports local farmers. Serving low carbon food in school cafeterias can substantially reduce carbon output since beef produces the highest GHG out of any meat source. Some plant crops produce more emissions and require more fertilizers than others.

According to experiences of the Kids Matter Parent group that helped transition the food service sector of Eugene 4J School District to be fully self-operation after contracting with Sodexo for 20+ years, they faced many challenges trying to improve the quality of food they received from the company. They faced resistance to phase out heavily processed foods with artificial colors and flavorings. They faced resistance to serve more local food, but when change did occur it would be slow, and not fully satisfactory. Now that they are fully self-operational, the Eugene 4J schools can be used as community kitchens in the event of emergencies. Sodexo owns most kitchen equipment, and does not allow their kitchens to be used in this manner.

Serving low carbon foods from local farmers will reduce individual carbon footprint. Co-benefits include education opportunities about GHG emissions from food, improves health by providing nutritious food to growing students, and it facilitate community connections between farmers and schools. This can be a great opportunity to design a project around food that can be used in the application to become a Certified Oregon Green School. To join the Green Schools movement, a staff member is required to coordinate a resource efficiency program and involve students and staff from the start. They must connect with the local Green Schools coordinator for help with planning, waste audits, educational resources, and inspiration. When a proposed program is underway, the staff member will send the completed Green Schools application to your coordinator.

The food procurement grant from the State of Oregon is non-competitive and is based on the number of meals served. The grant funds can only be used for: Products produced (grown, raised, or caught) or processed in Oregon. Used for meals served as part of USDA's child nutrition programs.

Diary production is a large source of methane emissions, so limiting the amount of milk that gets tossed out can potentially have a large impact on mitigating GHG emissions. Based off of observational studies of cafeterias, milk dispensers have helped reduce waste since people usually do not pour more than they intend to drink.

Serving free food for every child promotes an equitable future that prevents malnutrition and hunger. Being hungry has been proven to reduce concentration, test score outcomes, and increase negative behavior in children. It is not equitable that a child does not get to eat if they lose their lunch money; if they do not have money, but are not signed up for Free or Reduced Meals; if they forget their lunch at home; etc. It is also not equitable to be stigmatized from your peers if someone is on free or reduced meals and their peers are not.

This can be an opportunity to promote local business and reduce car transportation during lunch time. In addition to potential carbon saved from transportation. Food carts on school grounds could help students have access to food who walk/bike/bus/get dropped off. This can help minimize class difference between students who are fortunate enough to own cars and get to regularly commute to get food, and students who cannot access food off site due to transportation barriers.

Goal One Increase Local Food Purchasing

Strategy Two City government support to local food systems

Actions Subsidize the purchase of the permanent location for food co-op

Goal One
Strategy Two
Specifications

Silverton has an active group of local CSA growers who sponsor a weekly farmers market. They affiliate with another group dedicated to establishing a permanent co-op grocery in the city of Silverton. If the city supports subsidizes the purchase of the permanent location for food co-op, then it will be easier for regional farmers to connect with local institutions such as the school district, the hospital, restaurants, and grocery stores. Co-benefits will include increased networking opportunities for people and businesses connected to the local food system. It will help the co-op reduce the price of the food, so they can focus on providing healthy food to the community and not having to continue saving for a large purchase.

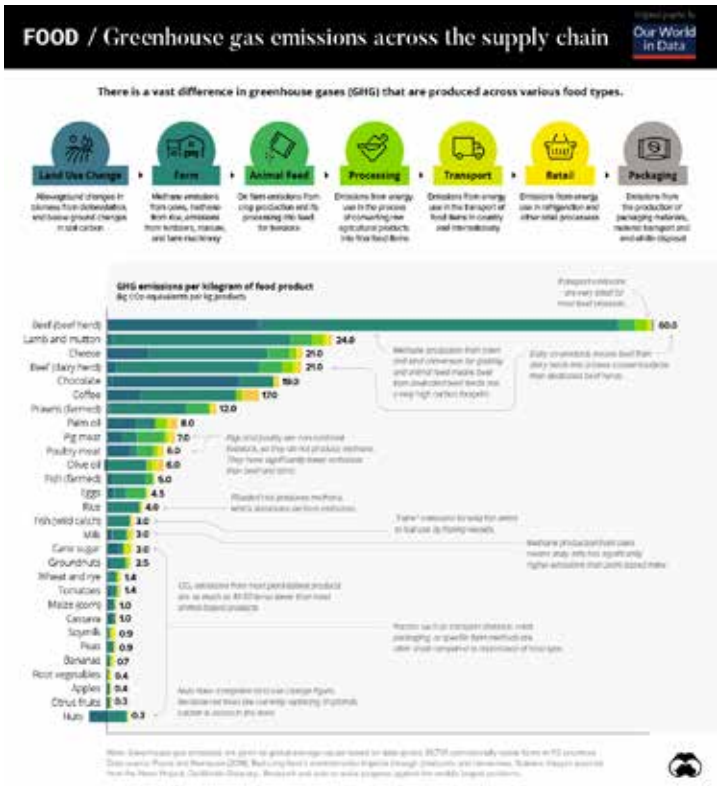
Goal Two — Increase Food Awareness Within Community

Strategy One — Preform Outreach and Provide Education to Community

Actions

- Make bulletins and pamphlets explaining how much GHG is used to produce each food and post them at schools, city hall, farmers' market, and SIlverton's social media
- Conduct community education programs and workshops at community gardens
- Run food and climate oriented education projects at all schools by cooperating with The Oreogon Garden

Precedent



Co-Benefits — Education | Gives Back to Community | Reduce GHG Emissions

Lead & Partners — Sustainable Silverton | The Oregon Garden

Timing — Short (community outreach via social media & websites)

Cost — Low (event cost determined by current Oregon Garden Events costs)

Goal Two Strategy One Specifications

It is proven that food awareness has the ability to improve an individual's diet. To achieve food awareness in Silverton, the City can inform the citizens of various health implications and how changing their diet can help reduce greenhouse gas (GHG) emissions. For example, meat production emits more GHG than plant production, and local food has less impacts on greenhouse gas emissions. Informing citizens of how slight changes of their diet can help them have a better understanding of their current diet habits and how it is negatively affecting the environment. Knowing is the first step of action.

The Silverton Grange Garden practiced community outreach by providing lunch in 2015 to encourage citizens to eat local. This is a positive approach, although this garden is not currently active. We propose that Sustainable Silverton partners with The Oregon Garden to help administer more workshops that citizens can attend to be informed about the relation between local food and lower greenhouse gas emissions.

Community outreach can be approached in various ways and each technique can be tested for success. Bulletins and pamphlets can be posted in a public location for individuals to read and take as they please. These handouts can be created and distributed monthly and relate to a monthly workshop that will take place in Silverton. Each workshop can be led by members of The Oregon Garden who can share knowledge of local food production and its importance for the community. Each workshop should be structured around the idea that increasing public knowledge and awareness of the impacts of food purchasing and dietary choices on climate change.

To implement an educational opportunity, this program will partner with The Oregon Garden to help structure workshops and make connections with experienced gardeners. The Oregon Garden currently hosts community events that welcome citizens of all ages to participate. From the events posted on their website, there are no existing events that involve food-based gardening. Partnering with The Oregon Garden will attract more members to participate in educational workshops and will allow the existing program to expand on more events.

Goal Two — Implement Local Food System for Community

Strategy One — Develop a Public Community Garden

Actions

- Community members maintain individual garden plots and harvest self-grown food
- Host sustainable gardening events and workshops by partnering with The Oregon Garden
- Allow classroom access to teach youth about the importance of eating local
- Provide demonstration gardens to help address local food insecurity

Precedent

1 - Silverton Senior Center
2 - Skate Park
3 - Robert Frost School
4 - Dog Park
5 - Extend Pavement for Access
6 - Additional Parking Lot
7 - Demo Gardens
8 - Community Garden Plots
9 - Community Center / Tool Shed
10 - Public Food Forest

Co-Benefits — Education | Gives Back to Community | Reduce GHG Emissions

Lead & Partners — Robert Frost School | The Oregon Garden | City of Silverton

Timing — Medium (building and growth time)

Cost — Medium (community garden grant and garden plot costs)

Goal Three
Strategy One
Specifications

The community garden will be a space to allow citizens of Silverton to learn and practice sustainable gardening techniques. The space will be designed to offer programs other than gardening as well. The design will consist of garden plots for community members which will be available to rent for each season at an affordable price. The space will also have a designated pavilion or indoor location to host community events, educational workshops, and a periodic location for the Silverton Farmer's Market.

The proposed location for the Community Garden is on public land behind the Silverton Senior Center. Expanding the existing elements and incorporating a community garden and food forest will allow for citizens to publicly enjoy wandering and harvesting through the food forest and allow for garden plot renting.

To prevent food and gardening tool theft, the reserved plots will be boarded with a fence that will remain locked at unsupervised times. The fence should be tall and surrounded with native plants that can help deter deer from damaging any plants. The demonstration garden will also have a fence, but will remain unlocked to allow for public food harvesting.

To ensure structure, a community garden host would be ideal to incorporate. The city of Eugene offers part-time jobs to experienced individuals that provide general garden maintenance and share gardening knowledge with community garden members. This would require funding from the City of Silverton to ensure that desired needs are being fulfilled.

The demonstration plots will be used as an educational opportunity by the community during educational workshops. They will also be accessible to students at neighboring schools, and will encourage schools to implement a gardening class. This opportunity will help teach the future of Silverton that growing your own food is both ecologically beneficial and satisfactory.

The success of this strategy can be measured by current success of similar community gardens in other cities and by the desire of a community garden for Silverton. Getting a sense of how many people would be interested in renting a garden plot at a low cost and if neighboring schools would be interested in creating a gardening class would help justify pursuing this garden.

Goal Two — Plant a Public Food Forest

Strategy One — Planting of edible trees and shrubs by community volunteers

Actions

- Provide educational signage for each plant with food description and proper harvesting times
- Public access to food will help address local food insecurity
- Use Beacon Food Forest as precedent to measure success

Precedent

The Beacon Food Forest in Seattle, WA. This design can be used for inspiration and begin to imagine a community garden and food forest implemented in Silverton. The scale of this garden would be reduced, as the space in Silverton is smaller than this area in Washington.

Co-Benefits — Education | Gives Back to Community | Reduce GHG Emissions

Lead & Partners — Sustainable Silverton | The Oregon Garden | City of Silverton

Timing — Medium (building and growth time)

Cost — Medium (community garden grant and garden plot costs)

Goal Three
Strategy Two
Specifications

The public food forest can be implemented with the proposed community garden. This space will also be surrounded with a large fence to prevent harm from deer, but will remain unlocked to allow for citizens to visit at any time. Having the food forest open for public access can help to address local food insecurity by providing healthy and locally grown food to the community.

During various harvest seasons, a harvesting event could occur where community members harvest and donate any leftover food to the local food bank. These donations can contribute to individuals who cannot afford a meal and support the understanding that everyone deserves access to healthy and locally grown food.

The food forest will be filled with various types of edible plants and shrubs. Each plant and shrub that is planted will have a sign explaining what the tree or shrub is, when the harvesting time is, what the food tastes like, and any other useful information. This signage can help users prevent any allergies and give a better understanding of which foods are edible.

When planting the trees and shrubs for the food forest, Sustainable Silverton can partner with The Oregon Garden to host a planting event that will welcome citizens to participate in volunteer planting. These trees and shrubs will not begin to produce fruit for 2-6 years, so members can enjoy watching their life cycle.

The Beacon Food Forest is a prime example of what a food forest can look like and can be implemented in its own way within Silverton. Beacon Food Forest is very successful and valued by so many community members in Seattle, and can also be successful in Silverton if implemented the correct way. Once the food forest is established and harvesting begins, the success can influence expansion to other public lands of Silverton.

Implementation

Strategy	Strategy Type	Who has control: Local Government, Commercial/Industrial, Or Citizen/Community	Lead agency/ partners	Timing	Cost	Co-benefits
Localize school food in the silver falls school district	Policy	School District	City planning office	Medium (5 years)	Low (less than $20,000)	Improving human health
City support to local food systems	Policy	Local Government	City planning office	Medium (5 years)	Low (less than $20,000)	Improving human health
Conduct community education programs and workshops	Outreach	Local Government	Sustainable Silverton, The Oregon Garden, Neighboring schools, The Grange Garden, Farmers' Market	Short (3 years)	Low (less than $20,000)	Increasing local and low-carbon diet
Develop public community garden	Planning	Citizen/Community	City, Sustainable Silverton, Neighboring Schools	Medium (5 years)	Medium (less than $20,000)	Education, Reduce GHG Emissions
Develop Public Food Forest	Planning	Citizen/Community	The Oregon Garden, Sustainable Silverton	Medium (5 years)	Medium ($20,000-$50,000)	Education, Gives Back to Community, Addressing

Implementation & Monitoring

Our goal to increase local food purchasing prioritizes policy implementation that addresses school food in the Silver Falls School District. The school district serves about 3,900 students, which is a third of the city's population. This is an opportunity to make structural impact in the community by making improvements to the district nutrition program and their food supply. Since it is hard to convince people to change eating habits, improving the school food policy can serve as an example to educate students about carbon emissions from food. The distance food travels from production to consumer makes up about 5% percent of the foods carbon emissions, how the food is grown makes up roughly 68%. A vegetarian diet greatly reduces an individual's carbon footprint but switching to less carbon intensive meats can have a major impact as well.

Implementation & Monitoring

In the Strategic Vision of the Silver Falls School District there is consideration to make school meals free for all students at all schools. Google as a company was able to make changes in their employee eating habits by serving food for free, limiting the amount of meat served, and serving low carbon foods (Black 2020). Focus groups have suggested that the district should have more farm to table practices especially because of the rich agricultural area the district resides in (Silver Falls School District 2018:11). Why Localize? Food grown closer to home produces fewer transportation emissions, saves on energy that is used for storage and refrigeration, and supports local farmers. Farms of all types are drivers in the Silverton area's economy because of agricultural exports, but these farms could also serve as a primary source of food for much of the Silverton community.

The strategy to increase local food purchasing requires two actions and this strategy combines the food purchasing and local food system strategies in the Silverton Energy plan. First the school board or superintendent must cancel the food service contract with Sodexo and get consultation from the Kid Food Matters parent group in Eugene. This organization was able to transition the Eugene 4J School District from a Sodexo food contract to having the entire school district be self-operated. Beginning July 1, 2019, 4J Nutrition Services assumed all management of student meal service, after more than 20 years of contracting with a food services management company. Eugene schools serve many items that come from Oregon farms and two of their schools receive grant funding to serve free fresh fruits and vegetables as snacks. This parent group plans on expanding their consultation work to help other school districts in Oregon transition to self-operation and to get connected with grants and funds.

The second action to increase local food purchasing in the Silver Falls School District is to apply to as many external funding sources as possible ease the transition costs to self-operation. Sodexo owns all the kitchen equipment, not the schools, so the biggest cost of transitioning is not food purchasing or wages but replacing any kitchen equipment that gets taken away by canceling the food service contract. to The food service annual budget costs which includes the cost of food and salaries for previous years for the entire school district are from 2014-2015, $1,058,561 was spent; from 2015-2016, $978,481 was spent; from 2016-2017, $1,236,00 was spent; and from 2017-2018, $1,225,00 was spent. A major way to support

w and to support local food purchasing is to participate in the Oregon Farm to School Grant Program that was expanded by HB 2579. This food procurement grant is non-competitive and based on the number of meals served. These grant funds can only be used for products produced (grown, raised, or caught) or processed in Oregon, and for meals served as part of USDA's child nutrition programs.

Comprehensive Plan Suggestions

The City of Silverton Comprehensive Plan does not address food purchasing, community gardening, or food insecurity. It is necessary that the city's comprehensive plan be equitable for all Silverton residents, so it must acknowledge current food insecurity in marginalized communities, it must have a goal to address these issues and to prepare for population growth to preemptively address issues so communities will not continue to be marginalized. One way the city can begin to address this void in their plan, is to merge the recommendations in the Silverton Community Survey, the Downtown Master Plan, and the Parks and Recreation Master Plan that discuss the need for community gardens and food accessibility for the public.

There are not many community gardens, if any that are functioning, in Silverton, so it is important that the city takes initiative in operating their own community gardens to tackle food-insecurity in the city, especially as the population is projected to increase at a 10% annual rate. Community gardens can help marginalized communities struggle with food security or who cannot afford to eat organic products. According to the Silverton Community Survey, multiple people discussed that there is a need for community gardens that can address food insecurity in the community, support community livability, and reduce the need to import non-local food (Transportation and Growth Management Program 2017). The Downtown Master plan addresses the importance gardening has to the community indirectly, because the market analysis done the city conducted revealed that there is continuous community support for the downtown gardening store (2007:23). According to the City of Silverton Parks and Recreation Master Plan Goal 7, action 7.6 states that there is a need to develop a cooperative program between the City and School District to engage students in outdoor classroom projects that help connect youth with nature; and action 7.8 states that the city needs to integrate community gardens into existing parks and open space sites (City of Silverton 2008:91). Our goal to implement local food system & edible landscapes, will address the recommendations in the Community Survey and the Parks and Recreation Master Plan, since it proposed a demonstration garden that can be used to address food insecurity, community cohesion, a space to share knowledge, it will be built in an existing park, and provide outdoor classroom opportunities for all grade levels.

Resources

Black, Jane. 2020. "How Google Got Its Employees to Eat Their Vegetables". Medium Onezero.

Boswell, M. et al. 2011. Local Climate Action Planning. Island Press
Center for Sustainable Systems, University of Michigan. 2019. "Carbon Footprint Factsheet." Pub. No. CSS0905.

Center for Public Service. 2019. "City of Silverton Parks & Recreation Study Final Report" Portland State University.

Sustainable Denton. 2012. Simply Sustainable: A Strategic Plan for Denton's Future. City of Denton, Texas.

City of Silverton. 2008. City of Silverton Parks and Recreation Master Plan.
Community Service Center. 2017. "2016 Silverton Community Survey". University of Oregon: Eugene

Corvallis Sustainability Coalition. 2015. Community Sustainability: A Framework for Action.

FEASting in Silverton by Melissa Wagoner, Resource Assistance for Rural Environments, 1 January 2016

Heller, M. and G. Keoleian. 2014. "Greenhouse gas emissions estimates of U.S. dietary choices and food loss". Journal of Industrial Ecology, 19 (3): 391-401

Jannie I. Macdiarmid, Flora Douglas, Jonina Campbell, Eating like there's no tomorrow: Public awareness of the environmental impact of food and reluctance to eat less meat as part of a sustainable diet, from "Appetite,"
Volume 96, 1 January 2016, Pages 487-493.

Louv R. 2005. Last child in the woods: Saving our children from nature-deficit disorder. Chapel Hill, NC: Algonquin Books.

Marion County Emergency Management. 2016. Marion County Multi-Jurisdictional Hazard Mitigation Plan. University of Oregon, Community Service Center, Community Planning Workshop, & Oregon Partnership for Disaster Resilience.

Oregon Department of Fish and Wildlife. 2008. Oregon Black-Tailed Deer Management Plan. Salem, Oregon.

Poore, J. and T. Nemecek. 2013. "Reducing food's environmental impacts through producers and consumers". Science 01 Jun 2018:Vol. 360, Issue 6392, pp. 987-992. DOI: 10.1126/science.aaq0216

Poehler, Bill. 2019. "Schools learn how reducing waste can impact more than garbage bill". Salem Statesmen Journal.

Putnam RD, 2000. Bowling Alone: The Collapse and Revival of American Community. New York: Simon and Schuster.

Silver Falls School District 4J. 2017. Approved: Proposed Budget 2017-2018. Budget Committee Hearing.

Resources

Silver Falls School District 4J. 2018. Silver Falls School District Strategic Vision Focus Group Report.

Sustainable Silverton. 2019. Silverton Energy Plan. City of Silverton.

Transportation and Growth Management Program. 2007. "Silverton Downtown Master Plan". City of Silverton

United States Environmental Protection Agency. EnviroAtlas: Eco-Health Relationship Browser. Retrieved: March, 2nd, 2020, from https://enviroatlas.epa.gov/enviroatlas/Tools/EcoHealth_RelationshipBrowser/index.html

Warhurst, Pam. 2012. How we can eat our landscapes. TEDSalon London

Wilson, EO, 1984. Biophilia. Cambridge, MA: Harvard University Press.

Photo Resources

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