



Beyond the Pandemic: Addressing the Silent Crises in Public Health & Food Security through Planning











JORDEN BISCHOFF & HISER, P.L.C.























Panelists:

Jonathan Rosenbloom, Professor at University of Vermont Law School Laurie Beyranevand, Director of the Center for Agriculture and Food Systems and Professor at University of Vermont Law School Chris Duerksen, Senior Advisor, Clarion Associates







Major Public Health Challenges Presented by the Food System







A great many people suffer from gastric troubles. This is due in the first place to the fact that the people are compelled to eat a dry lunch, sandwiches, etc....

It is also due to the congestion. It is hardly possible for a great many of the factory employees, especially on the higher floors to have the time to go down and eat their lunches in a neighboring restaurant and then have time to come back again to their work in the high buildings. They might have time if there were not such congestion.

Statement by Dr. George M. Price, Director of the Joint Board of Sanitary Control to the NYC Commission on Building Districts and Restrictions, May 24, 1916



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Food system impacts on public health at the local level

- Diet related disease
- Hunger and food insecurity
- Water quality
- Infectious disease
- Air pollution
- Pesticide exposure
- Worker safety



Source: Chicago Tribune

Diet Related Disease

"This study shows that high BMI, smoking, and high fasting plasma glucose are the 3 most important risk factors in the United States, and that although smoking is decreasing, BMI and fasting plasma glucose levels are steadily increasing. These 2 risk factors pose unique challenges in the United States given that unabated, they have the potential to change the health trajectory for individuals in many states. Levels of overweight and obesity increased during the study period. US residents need to do more to maintain their weight or reduce it, when needed, as well as access systems to support these intentions. Although physical activity increased during the study period, the levels of increase were not enough to control weight gain. Physical inactivity is a risk factor for many diseases, but increasing activity is not enough on its own to reduce weight or prevent weight gain. Obesity is associated with increased diabetes, cardiovascular diseases, some neoplasms, and poor health-related quality of life. This study calls for renewed efforts to control weight gain at the community level."

Source: The U.S. Burden of Disease Collaborators, The State of U.S. Health, 1990-2016: Burden of Diseases, Injuries, and Risk Factors Among US States, 14 JAMA 1444 (2018)



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Unhealthy **diet** contributes to approximately 678,000 deaths each year in the **U.S.**, due to **nutrition**- and obesity-**related diseases**, such as heart **disease**, cancer, and type 2 diabetes. In the last 30 years, obesity rates have doubled in adults, tripled in children, and quadrupled in adolescents.

Source: Center for Science in the Public Interest



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Hunger and Food Insecurity

Food insecure—At times during the year, these households were uncertain of having, or unable to acquire, enough food to meet the needs of all their members because they had insufficient money or other resources for food. Food-insecure households include those with *low food security* and *very low food security*.

- 10.5 percent (13.7 million) of U.S. households were food insecure at some time during 2019.
- Significantly down from 11.1 percent in 2018.

Source: USDA, Economic Research Service

Due to COVID-19, the number of food insecure households was estimated to have more than doubled with figures ranging from 22 to 38 percent

The number of households with "very low food security," or households where "normal eating patterns were disrupted due to lack of resources," more than doubled as a result of the pandemic, increasing from 4 percent to 11 percent.





Source: National Geographic

Water Quality

"In the 2000 National Water Quality Inventory, states reported that agricultural nonpoint source (NPS) pollution is the leading source of water guality impacts on surveyed rivers and lakes, the second largest source of impairments to wetlands, and a major contributor to contamination of surveyed estuaries and ground water. Agricultural activities that cause NPS pollution include poorly located or managed animal feeding operations; overgrazing; plowing too often or at the wrong time; and improper, excessive, or poorly timed application of pesticides, irrigation water, and fertilizer. Pollutants that result from farming and ranching include sediment, nutrients, pathogens, pesticides, metals, and salts.."





Source: Civil Eats

Source: EPA

Infectious Disease

"Pathogens are parasites, bacterium, or viruses that are capable of causing disease or infection in animals or humans. The major source of pathogens from CAFOs is in animal manure. There are over 150 pathogens in manure that could impact human health.

The potential for transfer of pathogens among animals is higher in confinement, as there are more animals in a smaller amount of space. Healthy or asymptomatic animals may carry microbial agents that can infect humans, who can then spread that infection throughout a community, before the infection is discovered among animals.

There is also the possibility of novel (or new) viruses developing. These viruses generate through mutation or recombinant events that can result in more efficient human-to-human transmission."

Source: CDC



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Source: Sierra Club

Air Pollution

"While air pollution from agriculture includes emissions from tractors and farm vehicles, the greatest agricultural contributors to air pollution stem from animal-raising operations. Cattle, pig, and chicken operations release methane, nitrous oxide, and ammonia into the air. These gases can accelerate climate change and pose danger to human health."

Source: USDA, National Institute for Food and Agriculture





Source: Upper Missouri Water Keeper

Pesticide Exposure

"Recognizing that 891 chemical "active ingredients" are registered as pesticides, and that pesticides are marketed specifically because they are toxic to some living thing; and

Recognizing that many pesticides are intentionally and routinely introduced into the environment, including 523 pesticides allowed in or on foods or animal feeds;

Understanding that an estimated 82% of American households use pesticides, with homeowners applying approximately 136 million pounds of pesticides each year indoors, or to their gardens or lawns; and

Recognizing that each year, the nation's poison control centers, on average, report at least 59,000 children under age six suffering unintentional exposures to pesticides, while an average of more than 10% of these incidents are due to organophosphate insecticides; and

Further recognizing that at least 140 pesticides registered by the Environmental Protection Agency have been identified as toxic to the brain and nervous system, while approximately 90 known, probable, or possible carcinogens are approved for use on foods; and

Understanding that when monitored, significant residues of many pesticides or their metabolites have been detected in the urine of a great percentage of the adult or child populations sampled...."

Source: American Dublic Health Acception







Source: Earthjustice

Worker Safety

Farmworkers face numerous workplace hazards including injuries from heavy machinery and repetitive motion, as well as illness from exposure to zoonotic disease, pesticides, and intense heat.

Source: American Public Health Association

Jobs in meat and poultry processing plants are not only poorly compensated but some of the most dangerous. Meatpacking and processing workers kill, eviscerate and cut up thousands of animals every day in conditions that are humid, slippery, loud and in temperature extremes. Respiratory problems, skin infections and falls are common.

Source: Foodprint

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Source: Harvest Public Media

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Building Food Security and Sovereignty Through Local Zoning Codes

Jonathan Rosenbloom, Vermont Law School Rocky Mountain Land Use Institute, March 19, 2021



DIVE IN Chapters



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Interdisciplinary Collaboration:

- Students from six law schools [Vermont Law School, Drake Law School, Idaho Law School, Sturm College of Law (U. Denver), Elisabeth Haub College of Law (Pace), U. Connecticut Law School]
- Practitioners from Colorado and Florida
- Academic experts from Vermont, Connecticut, and New York

The Result:

- 40 innovative recommendations to increase food security and sovereignty across development codes
- Supported by over 250 enacted ordinances
 - Jurisdictions from Oregon to Maine and Arizona to Florida
 - Jurisdictions from several hundred thousand citizens to a couple hundred citizens

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SDC SUSTAINABLE DEVELOPMENT

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CHAPTER 6.2 FOOD SECURITY AND SOVEREIGNTY

To explore local ordinances:

1. View and select subchapter actions in the grid below 2. Perform a word search on the <u>home</u> page

While we've uploaded several ordinances to this subchapter, it is still under construction. <u>Sign-up</u> to receive our newsletter and we'll inform you when the content is complete!

	Remove Code Barriers	Create Incentives	Fill Regulatory Gaps
BEST	 Bees in Urban and Suburban Districts Community Gardens on Private Property as a By-Right or Permitted Use Farmers Markets in a Variety of Districts Keeping Fowl in Urban and Suburban Locations Permit a Broad Range of Urban and Suburban Agricultural Uses By-Right Temporary Farm Stands 	 Grocery Store Development in Recognized Food Deserts Grocery Stores and Infill Development Subdivision Set-Asides for Agricultural Farmland 	 Concentrated Animal Feeding Operation (CAFO) Regulations Cost of Services Studies for All Developments in Agricultural Areas Create Urban Growth Area Development Restrictions to Protect Prime Soils Establish Urban Service Area Limit the Density of Dollar and Small Box Discount Stores in Food Deserts and Food Swamps Protection of Pollinators from Habitat Loss and Chemical Exposure
BETTER	Agricultural Animals as Accessory Uses, Permitted Uses, and By-Right in Urban and Suburban Areas.	Agricultural Lots in Planned Unit Developments (PUDs) Developments (Agricultural Activities	Offsetting Agricultural Land Loss Stemming from New Development Sathagka Dratacting Saparitius Habitate
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BETTER	 Agricultural Animals as Accessory Uses, Permitted Uses, and By-Right in Urban and Suburban Areas Agricultural Overlay Zoning Aquaponics, Hydroponics, and Aquaculture Commercial Sales of Food Produced On Site in Urban and Suburban Areas Equipment and Composting as Accessory and Temporary Uses Front Yard Gardening in Residential Districts 	 Agricultural Lots in Planned Unit Developments (PUDs) Permit Commercial Agricultural Activities in Urban/Suburban Areas and Allow Them to Satisfy Open-Space Requirements Voluntary Agricultural Land Protection Districts 	 Offsetting Agricultural Land Loss Stemming from New Development Setbacks Protecting Sensitive Habitats and Water Quality

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CHAPTER 6.2 FOOD SECURITY AND SOVEREIGNTY

Farmers Markets in a Variety of Districts

Zachary Gain (author), Brandon Sheffert, Sara Bronin, Jonathan Rosenbloom, Lihlani Nelson, Claire Child, & Laurie Beyranevand (editors)

INTRODUCTION

Farmers markets are public and recurring assemblies of farmers selling their produce directly to consumers. [1] These markets can be organized by local governments, nonprofits, or as a mutually benefitting relationship between the two. [2] To promote farmers markets and increase the supply of healthy, fresh food, several local governments permit farmers markets in various zoning districts. These ordinances typically include limits on transportation of produce, [3] days when markets are permitted, [4] products allowed to be sold, [5] and others.

In addition, and as illustrated in the examples below, some local governments permit farmers markets by-right or by special use permit. Farmers markets are permitted by-right in a variety of zoning districts, including commercial zones, [6] mixed-use zones, [7] and industrial zones. [8] Some local governments permit farmers markets to operate year-round, [9] while others allow them on a temporary seasonal basis. [10] In addition to fresh produce, some local governments permit the sale of crafts and baked goods. [11] Finally, some local governments allow live performances at farmers markets, which helps to encourage attendance. [12]

As discussed in more detail below, allowing farmers markets in certain zoning districts can result in considerable benefits. If ordinances were to explicitly permit farmers markets in certain zoning districts, it would enable those districts to reap the benefits of farmers markets and expedite the permitting process. [13] However, farmers markets can present challenges, such as an increase in pedestrian and vehicular traffic and noise levels. [14] These negatives may be abated by proper and targeted zoning requirements. [15]

EFFECTS

Permitting farmers markets in a variety of zoning districts can provide citizens with access to fresh produce and increase the health of the neighborhood. [16] Lower rates of body mass index (BMI) have been associated with living closer to farmers markets. [17] Some studies have also shown a negative correlation between proximity to farmers markets and diabetes. [18] Farmers markets not only provide healthy food, but they often do so at a competitive price compared to other retailers. [19]

Many farmers markets have begun accepting electronic payment methods in addition to cash.[20] Some markets also accept Supplemental Nutrition Assistance Program (SNAP) benefits (a federal program providing nutrition assistance to eligible low-income individuals and families), ensuring that farmers markets are accessible to more people/households[21] which further promotes access to fresh food.[22] Additionally, some states provide "Double Up Food Bucks" for purchases at farmers markets, which gives consumers \$1.00 to spend on fresh produce for every \$1.00 of SNAP benefits used to purchase fresh produce.[23] Providing double bucks to consumers encourages buying of benefity foods and markes food more affordable [24]

EXAMPLES

Gastonia, NC

Gastonia, North Carolina, permits farmers markets as a use in many zoning districts, [49] by-right in all but one commercial district, [50] and by-right in two industrial zones. [51] Pursuant to the ordinance, farmers markets are outdoor markets that sell fruits and vegetables to the public. [52] Similarly, Gastonia permits the sale of other food and handmade crafts at their farmers markets. [53] To ensure that these markets do not cause too much distress to city streets, the vendors at the markets are limited to using cars, vans, and small trucks to transport their produce. [54] Additionally, Gastonia proscribes how farmers markets are to operate, such as requiring a majority of the sales to be from fresh produce. [55] Furthermore, Gastonia requires that farmers markets adhere to the zoning requirements of the district hosting the market. [56] These additional requirements ensure that the city provides ample opportunity to access farmers markets, while ensuring that other zoning districts are not negatively affected by the markets.

To view the provisions see Gastonia, NC, Unified Development Ordinance §§ 2.7, 7.1-1 (2019).

Tempe, AZ

The Tempe, Arizona, zoning code expressly permits farmers markets in mixed-use and commercial zones. [57] Tempe's code allows for farmers markets to exist throughout the year and it also allows for regular recurring events, which is important for farmers looking to increase their customer base. [58] The aforementioned allowances permit Tempe's citizens and farmers to benefit greatly from their farmers markets.

Farmers markets are considered outdoor retailing under Tempe's code of ordinances, more specifically they are temporary outdoor vending. [59] Temporary outdoor vending is permitted in any zoning district subject to a Use Permit. [60] In addition to the permit, the farmers markets must not block the public's right-of-way nor interfere with vehicular traffic. [61] Furthermore, the use of sound amplification is prohibited at Tempe's farmers markets. [62] Tempe has restrictions in place that may help ensure that farmers markets can occur without disrupting noise levels, traffic, and pedestrian right-of-ways.

To view the provisions see Tempe, AZ, Zoning and Development Code §§ 3-202, 3-417 (2020).

Tumwater, WA

Tumwater, Washington, expressly permits farmers markets in its mixed-use districts. [63] The intent of the mixed-use zone district is to "provide an opportunity to develop areas in Tumwater that are transit oriented and pedestrian-friendly while still accommodating automobiles and provide affordable housing and quality community design."[64] Local governments that create more walkable mixeduse zones can better meet the nutritional needs of their citizens (for numerous briefs specifically addressing pedestrian mobility, including one on <u>Mixed-Use Zoning</u>, see <u>Pedestrian Mobility Chapter</u>). Tumwater's mixed-use districts are a great way for its citizens to access farmers markets either by car or by foot, which helps increase access to fresh food for many citizens.[65]

Additionally, Tumwater permits farmers markets in all commercial districts. [66] Farmers markets are permitted by right in every commercial district. [67] Tumwater's commercial districts are designed to promote business activity. [68] Allowing farmers markets in these districts helps to promote business activity, while also providing necessary access to fresh, healthy food. [69] Tumwater permits farmers markets in many of their districts, which provides its citizens with access to all the benefits that arise from farmers markets.

To view the provisions see Turnwater, WA, Turnwater Municipal Code §§ 18.07.020, 18.20.010, 18.20.30, 18.22.010 (2019).

Marion County, IN

ADDITIONAL EXAMPLES

Mount Horeb, WI, Code of Ordinances § 17.20 (9) (a) (2017) (permitting farmers markets in all districts subject to a temporary use permit).

<u>Victor, CO, Municipal Code § 16-12-10. (2019)</u> (permitting farmers markets as a temporary use in all commercial zones, but they may require a permit to operate).

Minneapolis, MN, Code of Ordinances § 548.30 (2018) (permitting farmers markets in all commercial districts).

Arlington County, VA, Zoning Ordinance § 12.5.17 (2020) (permitting open-air markets in most commercial districts).

Banning, CA, Code of Ordinances §§ 17.12.020, 17.108.020 (1) (2020). (permitting farmers markets by right in all commercial zones, and permitting temporary markets in all zoning districts subject to a temporary use permit).

Cumberland County, PA, Farmers' Markets Model Ordinance <u>§§ 1-4 (2014)</u>. (providing a model farmers market ordinance to help municipalities draft their own).

ADDITIONAL RESOURCES

Marlie Wilson et al., Contextualizing Farmers' Market Needs: Assessing the Impact of Community Type on Market Management, 49 J. Food Distribution Res. 1, 2 (2018), https://perma.cc/72ZU-LZVR.

Elisha Smith, Food Deserts and Farmers Markets, Center for Rural Aff. (June 13, 2011), https://perma.cc/37JW-SSXL.

Daniel R. George et al., Public Health Potential of Farmers' Markets on Medical Center Campuses: A Case Study From Penn State Milton S. Hershey Medical Center, 101 American Journal of Public Health 2226, (2011), https://perma.cc/32KA-ULRQ.

Center for Agriculture and Food Systems, Farmers Market Legal Toolkit, https://perma.cc/E7C9-VYYA (last visited June 29, 2020).

U.S. Department of Agriculture, National Agricultural Library, https://perma.cc/J5VW-B286 (last visited June 29, 2020).

CITATIONS

[]]Farmers Market Coalition, About Farmers Markets, https://perma.cc/9XQS-REPY (last visited June 29, 2020).

[<u>2]</u> Id.

[3] Chris Hergesheimer & Emily Huddart Kennedy, Farmers Markets, Local Food Systems and the Social Economy: A Thematic Literature Review, 15 (2010), https://perma.cc/9W7S-5HM7.

[4] Marion County, IN, Code of Ordinances § 743-304 (D).

[<u>5]</u> Id.

[6] Gastonia, NC, Unified Development Ordinance § 7.1-1 (2019).

[7] Tumwater WA Tumwater Municipal Code & 18 20 030 (2019)





- 1. Supporting Personal and Community Production
- 2. Increasing Access to Food
- 3. Conserving Land for Agriculture



1. Supporting Personal and Community Production

Front Yard Gardening in Residential Districts

• Columbus, OH, Mun. Code. § 3332 (current through 2019).

Keeping Fowl and Bees in Urban and Suburban Locations

 Spokane, WA, Municipal Code § 17C.310.115 (2014) (keeping of chickens limited only by lot size and setbacks); Chicago, IL, Zoning Ordinance and Land Use Ordinance §17-17-0270.7 (2018) (up to five honeybee colonies as an accessory use).

Allowing Composting in More Districts

• Altoona, WI, Altoona Municipal Code Ch. 8 § 8.34.20-8.34.040 (2018).

Permit a Broad Range of Urban and Suburban Agricultural Uses By-Right

 Atlanta, GA, Code of Ordinances §16-29.001(83)(a-b) (2020) (urban gardens as an accessory use by right in residential zones).

Community Gardens on Private Property as a By-Right or Permitted Use

• Pueblo, CO, Code of Ordinances § 17-4-13 (2011) (allowing community gardens by-right subject to additional regulations).

Structures and Fencing as Accessory and Temporary Uses

• Boston, MA Zoning Code § 89-10(4)(a) (2013).



2. Increasing Access

Agricultural Overlay Zones

• New Rochelle, NY, Municipal Code § 331-175.11A-G (2020) (allowing byright urban agriculture and greenhouses over max height limit without variance).

Farmers Markets in a Variety of Districts

• Mount Horeb, WI, Code of Ordinances § 17.20 (9) (a) (2017) (farmers markets in all districts subject to a temporary use permit).

Temporary Farm Stands

Queen Anne County, MD, Code of Ordinances, ch. 18:1 part 3 art. VII § 53(D)(6) (Oct. 9, 2018) (farm stands as temporary use).

Permit the Sale and Display of Fruits and Vegetables on Public Sidewalks

• New York City, NY, The Rules of the City of New York § 6-07 (2020).

Limiting Dollar Stores and Requiring Healthy Foods

• Tulsa, OK, Code of Ordinances §§ 42.35.050(L)(4), 42.20.060 (current through 2020) (creating Healthy Neighborhood Overlay District).

Grocery Stores and Infill Development

 Prince George's County, MD, Code of Ordinances § 10-311 (2014) (providing tax credits).

FARMLAND Forever



3. Conserving Land for Agriculture

Subdivision Set-Asides for Agricultural Farmland

• East Hampton, NY, Zoning Ordinance § 193-2-70(b) (current through Jun. 3, 2020) (planning board may require development on non-prime soils).

Agricultural Lots in Planned Unit Developments (PUDs)

 Courtland Township, MI, Zoning Ordinance § 9.02(c)(3), § 9.05(C)(1)(e) (2014) (requiring PUDs to preserve at least 40 percent of the total area as active agriculture or open space).

Offsetting Agricultural Land Loss Stemming from New Development

• Morgan Hill, CA, Code of Ordinances ch. 18.152 (2018) (requiring developers who convert agricultural land to offset conversion by dedication with at least a 1:1 ratio or pay a fee).

Cluster/Conservation Subdivision in Rural/Urban Area

• Jamestown, RI, Code of Ordinances § 82-1600 to 1608 (2003).

Protection of Pollinators from Habitat Loss and Chemical Exposure

- Champaign, IL, Code of Ordinances § 37-619.3 (Table XI-C) (5.1) (2018) (requiring a 20-foot buffer of pollinator-supporting vegetation to surround stormwater detention and drainage areas).
- South Miami, FL, Code of Ordinances § 5-1(d) (2016) (banning use of biocides and insecticides within City limits).



Happy New Year!

Lots of movement in the Top 10 SDC recommendations viewed this month, although the reigning champ, Mid-clock Pedestrian Crossings, hangs on to #1 (must be all those communities dreaming of warm weather). Only four returning recommendations from last month. We had another two coming back from a month long hiatus and four new to the Top 10. We also had a three-way tie in 10th place. In order of most viewed:

1. Mid-block Pedestrian Crossings

Fourth time in the Top 10, hanging on to #1 again.

Mid-block pedestrian crossings are designated areas for pedestrians to cross the street between where vehicular intersections occur. These crossings

2. Mixed-Use Zoning

Second time in the Top 10, jumping all the way to #2.

Mixed-use zoning permits a complementary mix of residential, commercial, and/or industrial uses in a single district. Mixed-use zoning can take a....

3. Parking In-Lieu Fees

Third time in the Top 10, after a month long hiatus, it's parked again!





Food Security and Sovereignty Chapter Launching Today!

Today we are launching the food security and sovereignty chapter with almost 40 recommendations, supported by dozens of case studies. The new chapter contains free, fully searchable ways to enhance nutritious food and access to food in your community.

Recommendations include:

Community Gardens as a By-Right or Permitted Use Farmers Markets in a Variety of Districts Keeping Fowl in Urban and Suburban Locations Bees in Urban and Suburban Districts Broad Range of Urban and Suburban Agricultural Uses By-Right Temporary Farm Stands Grocery Store Development in Recognized Food Deserts Aquaponics, Hydroponics, and Aquaculture Front Yard Gardening in Residential Districts Permit the Display and Sale of Fruits and Vegetables Recycled Water Irrigation Systems for New Developments Special Use Permits for Agritourism on Farms

And many more . . .





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Rocky Mountain Land Use Institute



IT BETTER BUG YOU:

STOPPING THE INSECT ARMAGEDDON

Clarion Associates, LLC Chris Duerksen cjduerksen@aol.com

INSECT ARMAGEDDON

Decline In Pollinators
 Like Honey Bees
 Troubling—But Just
 Tip Of Iceberg

• Monarch Butterfly Plight Is Cautionary Tale





INSECT ARMAGEDDON: WHAT, ME WORRY??



- 10 QUINTILLION INSECTS ON PLANET
- INSECTS MAKE UP 80% OF ALL ANIMALS
- THEY CAN BE ANNOYING CRITTERS





INSECT ARMAGEDDON: WHY WORRY??

- WINDSHIELD EFFECT
- 76% DECLINE IN FLYING INSECTS IN GERMAN NATURAL AREAS
- 80% DECLINE IN NEW HAMPSHIRE BEETLES
- MAYFLY DECLINE BY 50% SINCE 2012 IN UPPER MIDWEST





INSECTS: FIVE CRUCIAL ECOSYSTEM JOBS

- POLLINATORS
- **PROVIDERS**





- PEST CONTROLLERS
- **DECOMPOSERS**
- SOIL ENGINEERS





INSECT ARMAGEDDON: WHAT'S BEHIND THE CRISIS

- CLIMATE CHANGE
- FARMING/RESIDENTIAL PESTICIDE USE
- HABIT LOSS TO AG/DEVELOPMENT



INSECT ARMAGEDDON: WHAT CAN LOCAL GOVTS DO?

• **PROTECT/RESTORE HABITAT**

- PHASE OUT PESTICIDE USE
- **PROMOTE COMPACT DEVELOPMENT**
- ADDRESS CLIMATE CHANGE
- LEAD BY EXAMPLE

LESSON #1: NEED A WELL-ROUNDED IMPLEMENTATION STRATEGY.





"If the only tool you have is a hammer, everything begins to look like a nail"—Mark Twain

- PLANNING
- ACQUISITION/ FUNDING
- RESTORATION
- EDUCATION/LAND-OWNER OUTREACH
- LEAD BY EXAMPLE
- **REGULATORY**



REGULATORY:

"In the West, a six-shooter and a smile are more persuasive than a smile alone" --Teddy Roosevelt



Remove Regulatory Barriers

• Create Regulatory Incentives

Enact Protective Regulations

REMOVE REGULATORY BARRIERS

- ALLOW BEE KEEPING IN RESIDENTIAL AREAS
- COMMUNITY GARDENS AS PERMITTED USE



• ALLOW FRONT-YARD VEGETABLE GARDENS



CREATE REGULATORY INCENTIVES

 OFFER DENSITY BONUSES FOR INSECT-FRIENDLY LANDSCAPING IN REQUIRED OPEN SPACE

 PROMOTE CONSERVATION SUBDIVISIONS IN RURAL AREAS



Nature-Friendly PROTECTION Communities AD LAND USE



Christopher Duerksen & Cara Snyder



ENACT PROTECTIVE REGULATIONS

- REQUIRE REDUCED USE OF PESTICIDES IN LANDSCAPED AREAS.
- FORBID EATING OF BUGS.
- REQUIRE USE OF POLLINATOR-FRIENDLY VEGETATION.
- SPECIFY INSECT-FRIENDLY BUFFERS ALONG RIPARIAN HABITAT AND AROUND STORM-MANAGEMENT





IMPLEMENTATION

DIFFERENT STROKES FOR DIFFERENT FOLKS—TAILOR TO COMMUNITY SIZE, ENVIRONMENT, POLITICS

