



Fargo-Moorhead Metropolitan Council of Governments

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To: Cass Clay Food Commission
From: Cass Clay Food Systems Initiative (CCFSI)
Fargo-Moorhead Metropolitan Council of Governments (Metro COG)
Date: March 2, 2017
RE: Cass Clay Food Commission Agenda and Correspondence

**13th Meeting of the
Cass Clay Food Commission**
March 8, 2017 10:30 am – 12:00 pm
Location: Fargo City Commission Chambers

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| 10:30 am | 1. Welcome <ul style="list-style-type: none">a. Approve Order & Contents of the Overall Agendab. Review & Action on Minutes from January 11, 2017 (Attachment 1) |
| 10:35 am | 2. Commission Check-In – Chair Rasmussen |
| 10:40 am | 3. Cottage Food Laws Blueprint Discussion & Vote for Approval (Attachment 2)
– Joleen Baker |
| 10:45 am | 4. Residential Gardening <ul style="list-style-type: none">a. Residential Gardening Blueprint (Attachment 3) – Joleen Bakerb. Community Perspective<ul style="list-style-type: none">i. Peter Schultz, Longspur Prairie Fund (Attachment 4a)ii. Christine Holland, Riverkeepers (Attachment 4b)iii. Ashley Fisk, Cass County Soil Conservation District (Attachment 4c)c. Public Inputd. Commission Discussion |
| 11:10 am | 5. Creating a Robust Local Food System in Fargo-Moorhead (Attachment 5) –
Angelica Anderson, Kaya Baker, and Katie Black, Concordia College |
| 11:25 am | 6. Cass Clay Food Network New Structure (Attachment 6) – Megan Myrdal |
| 11:35 am | 7. Fargo Chicken Update – Kim Lipetzky |
| 11:40 am | 8. Public Comment Opportunity – Chair Rasmussen |
| 11:50 am | 9. Commission & Steering Committee Roundtable |
| 11:55 am | 10. Commission Action Steps <ul style="list-style-type: none">a. Next Meeting – May 10, 2017 |
| 12:00 pm | 11. Adjournment |

Cass Clay Food Commission meetings are taped and rebroadcast on cable channel TV Fargo 56 each Friday at 11:00 am. People with disabilities who plan to attend this meeting and need special accommodations should contact Savanna Leach at Metro COG at 701.232.3242. Please contact us at least 48 hours before the meeting to give our staff adequate time to make arrangements. Meeting minutes are available on the City of Fargo Let's Eat Local website at www.letseatlocal.org and Metro COG's website at www.fmmetrococ.org.

Attachment 1

**12th Meeting of the
Cass Clay Food Commission
January 11th, 2017
Fargo Commission Chambers**

Members Present:

Arland Rasmussen, Cass County Commission, Chair
Mike Thorstad, West Fargo City Commission
Jenny Mongeau, Clay County Commission
Jim Aasness, Dilworth City Council
Heidi Durand, Moorhead City Council
Jon Evert, At-Large Member
Mindy Grant, At-Large Member
Dana Rieth, At-Large Member

Members Absent:

Stephanie Reynolds, At-Large Member
John Strand, Fargo City Commission

Others Present:

Megan Myrdal, Project Coordinator
Kim Lipetzky, Fargo Cass Public Health
Nikki Johnson, Joint University of Minnesota/North Dakota State University Extension Educator
Rita Ussatis, North Dakota State University Extension Agent – Cass County
Abby Gold, Cass Clay Food Systems Initiative
Deb Haugen, Cass Clay Food Systems Initiative
Joleen Baker, Cass Clay Food Systems Initiative
Suzanne Driessen, University of Minnesota Extension Food Safety Educator (via WebEx)
Julie Garden-Robinson, North Dakota State University Food and Nutrition Extension Specialist
Adam Altenburg, Fargo-Moorhead Metropolitan Council of Governments

Chair Durand called the meeting to order at 10:30 AM.

1(a). Approve Order and Contents of the Overall Agenda

A motion to approve the order and contents of the overall agenda was made by Ms. Mongeau and seconded by Ms. Rieth. The motion was voted on and unanimously approved.

Abby Gold arrived at 10:31 AM.

1(b). Review and Action on Minutes from September 14, 2016

A motion to approve the minutes was made by Mr. Aasness and seconded by Mr. Thorstad. The motion was voted on and unanimously approved.

Nikki Johnson arrived at 10:32 AM.

2. Commission Check-In

Chair Durand informed the Commission that members would have an opportunity to give an update on any news or events happening in the community.

Ms. Gold stated she is working with the Minnesota Food Charter Network shared measurement team. She explained that the team was set up to help identify specific measures and assess impacts of different Minnesota Food Charter strategies across the state.

Ms. Lipetzky stated that Fargo Cass Public Health met with Fargo planning officials and the city attorney on January 10 to discuss a draft backyard chicken ordinance. She informed the Commission that the ordinance would be a topic of discussion at the next Brown Bag lunch before Fargo city staff as well as members of the City Council and Planning Commission on January 18. She stated that a draft of the ordinance would likely be posted on the *Let's Eat Local* website to solicit public input before going through the city review process necessary for adoption.

Mr. Rasmussen asked, in the case of an ordinance such as backyard chickens, whether the city ordinance or a covenant take precedent. Ms. Lipetzky answered that a covenant would supersede city ordinances if language regulating an activity were included in a covenant.

Chair Durand informed the Commission that Moorhead is moving forward with single-sort recycling beginning on July 1. She stated that all households will be given separate collection bins for recyclables, with larger receptacles for multifamily units.

3. Transition of Chair and Appreciation for Chair Durand and At-Large Member Jessica Arneson.

Chair Durand informed the Commission that the Chair would be rotating from herself to Arland Rasmussen of Cass County for 2017. Ms. Lipetzky thanked Ms. Durand for her service and presented her with a certificate of appreciation. Ms. Lipetzky stated that former at-large member Jessica Arneson could not be at the meeting but that a certificate of appreciation would be given to her as well.

Chair Rasmussen also thanked Ms. Durand for her service.

Ms. Durand stated that she needed to leave the meeting due to another commitment.

Ms. Durand left at 10:44 AM

4. Selection of New At-Large Commission Member

Chair Rasmussen explained that, with the added interest in the vacant at-large member slot, the Steering Committee had invited the top three candidates to come and provide brief remarks before the Commission. He stated that, following the presentations, Commission members would vote on whom they would like to appoint to serve.

4a. Chris Olson

Chris Olson, culinary manager for Concordia College, informed the Commission that he had worked as a professional chef for 18 years. He stated that while living in Minneapolis-St. Paul, he looked for ways and activities to be involved outside the restaurant. He explained that he co-founded Paired, an underground dining club that paired local artists with a tasting menu, with one event featuring a 100-course dinner over the course of six and a half hours. He stated that another event he hosted was 'The Evolution of Cooking' at the Bell Museum of Natural History on the campus of the University of Minnesota. He explained that this event featured a five-course meal from prehistoric times to sous vide, a method of cooking in which food is vacuum-sealed in a pouch before being placed in a temperature-controlled steam environment.

Mr. Olson stated that he is a recent graduate of the University of Minnesota with a degree in food systems, an interdisciplinary study of food production and distribution. He explained that he studied everything from food cycles, food access, and food insecurity for lower income individuals – and devoted time to the Minneapolis Public Schools summer lunch program. He stated that he also studied and worked on ways to monetize the non-cash value of urban agriculture.

Mr. Olson stated that he is new to the Fargo-Moorhead area and that a major task as culinary manager for Concordia College is to increase the sustainability of dining services. He explained that he has also been active in the Heart-n-Soul Community Café, a pop up café run by Leola Dahl. He concluded that he would like to bring institutional representation to the Commission and that a systemic approach can help solve food issues in communities and build upon an evolving foodscape.

4b. Kayla Pridmore

Kayla Pridmore, owner/operator of Woodchuck Community Farm, informed the Commission that, upon hearing Mr. Olson’s remarks, she supported his bid to become new at-large member and stated that she looked forward to another opportunity in the future.

4c. Mara Solberg

Mara Solberg, owner/operator of Solberg Farms, shared her thoughts and feelings about being a potential at-large member. She informed the Commission that she was raised on a farm, was married to a farmer, and had a lifelong interest in gardening, sustainability, and good, healthy food. She stated that she developed a passion for agriculture through reading, including the book *All Creatures Great and Small* by James Harriot and articles in *Parents* magazine that highlighted gardening and fresh, local foods. She explained that she helped raise sheep, chickens, geese, and ducks over the years and that she enjoyed watching animals grow and learning from them.

Ms. Solberg explained that she has been involved in the Cass Clay Food Systems Initiative since September 2011 with the *Discovering Local Food Solutions* kick-off event at the Hjemkomst Center. She stated that she would like to help bring greater attention food systems issues and promote activities of the Commission by speaking at area schools, senior centers, and other venues. She concluded by stating that she had been excited to see the progress of the local foods movement to date, including the Red River Market and the Little Free Garden project, and was looking forward to helping with the growing food movement in the area.

With the conclusion of Ms. Solberg’s presentation, Chair Rasmussen asked Commission members to vote for their first, second, and third choice for new at-large member on the tally sheets provided and to pass them to Mr. Altenburg to total up.

5. Municipal Composting Blueprint Discussion and Vote for Approval

Chair Rasmussen asked Ms. Baker if there were any updates or revisions made to the municipal composting blueprint. Ms. Baker informed the Commission that a few changes had been made to the blueprint since it was first brought forth to the Commission in November.

Ms. Baker stated that one change to the blueprint dealt with a better understanding of the economic value of composting. She explained that this was done to better understand the value of composting versus the value of methane capture used by the City of Fargo landfill. She stated that information included in the blueprint comes from a paper entitled *A Roadmap to Reduce U.S. Food Waste by 20 Percent*. She explained that the economic value per ton of compost is

approximately \$4.00 and that many of the costs have to do with transportation and facilities needed for composting.

Ms. Baker explained that, with the help of Ms. Reynolds, another addition to the blueprint included an appendix on what specifically can and cannot be composted in most composting systems.

Ms. Myrdal added that there is growing interest in developing a municipal composting site in Clay County in the near future.

A motion to approve the municipal composting blueprint was made by Ms. Mongeau and seconded by Mr. Aasness. The motion was voted on and unanimously approved.

6a. Education: Understanding North Dakota and Minnesota Cottage Food Laws and Food Safety Regulations

Chair Rasmussen informed the Commission and the audience that two presenters would be providing information on cottage food safety regulations: Suzanne Driessen for Minnesota and Julie Garden-Robinson for North Dakota.

Suzanne Driessen, extension food safety educator for the University of Minnesota, provided information to the Commission regarding Minnesota's Cottage Food Law. She explained that the law went into effect on July 1, 2015 and that oversight is provided by the Minnesota Department of Agriculture. She stated that the law identifies a cottage food producer as an individual who: 1) manufactures food that does not require time or temperature controls for safety in a private home or non-food establishment, 2) sells directly to the end consumer without inspection or a license and, 3) registers with Minnesota Department of Agriculture for sales up to \$18,000 per year per individual.

Ms. Driessen explained that examples of non-potentially hazardous foods include: acid or acidified home-canned and home-processed fruits, vegetables, vinegars, baked goods, candy and confections, items which are dried, dehydrated, or roasted, icings, frostings, sugar art, jams, jellies, preserves, and fruit butters. She explained that these items are basically shelf-stable foods and that foods which require refrigeration for safety are not allowed under the cottage food exemption.

Ms. Driessen stated that cottage foods are sold directly to consumers and that goods can be exchanged at a producer's home, dropped off with a consumer, sold at a farmers market, or sold over the internet. She explained that cottage foods cannot be donated to food shelves or sold commercially at cafes or grocery stores. She stated that cottage foods cannot be directly exchanged at church bazaars but that it would be allowable for consumers to purchase tickets for cottage foods being sold and then pick up goods at a producer's home.

Ms. Driessen explained that local jurisdictions have minimal impact on cottage food regulations as those regulations are governed by the Minnesota Department of Agriculture. She stated that producers may request on-site inspections which are facilitated through local health departments. She explained that local jurisdictions can also pass zoning restrictions against cottage foods and may enforce a definition of what a community event is.

Ms. Driessen informed the Commission that there are training and registration requirements for cottage food producers but that these vary based on total sales by an individual. She explained that Tier I producers have individual sales of less than \$5,000 per calendar year and must complete a registration training course and exam through the Minnesota Department of Agriculture. She stated that Tier II producers have individual sales from \$5,000 to \$18,000 and must complete an additional

eight-hour safe food-handling course every three years. She explained that a \$50 registration fee is waived for producers who sell less than \$5,000 a year. She concluded by stating that the number of cottage food producers grew from 464 producers in 2015 to 1,862 Tier I producers and 68 Tier II producers in 2016.

Mr. Evert asked a clarifying question on whether cottage food producers may sell their goods at church bazaars. Ms. Driessen reiterated that a producer may not directly sell or donate goods through a church bazaar or similar community event but they can sell goods as an individual.

Ms. Solberg asked what role food co-ops play with regard to canned businesses. Ms. Driessen explained that a cottage food exemption is for individuals only and that goods cannot be produced or marketed through a food co-op or similar venture.

Ms. Grant asked what the regulations would be for a cottage food producer who also has access to a commercial kitchen. Ms. Driessen that access to a commercial kitchen would entail a different licensing system.

Julie Garden-Robinson, food and nutrition extension specialist at North Dakota State University, provided general guidance for food sales in North Dakota. She explained that the North Dakota Department of Food and Lodging has produced a fact sheet with guidelines for certain home-processed, home-canned, and home-baked goods. She stated that the fact sheet outlines where cottage foods can be sold, what can and cannot be sold, how foods must be labeled, and the reason for cottage food rules and regulations.

Ms. Garden-Robinson informed the Commission that cottage foods may be sold in North Dakota at county fairs, nonprofit charitable events, public spirited and/or community celebrations, farmers markets, and roadside stands. She stated that products covered under the fact sheet include pickles, vegetables, or fruits having an equilibrium pH value of 4.6 or lower and non-temperature controlled baked goods that do not require refrigeration.

Ms. Garden Robinson explained that individuals may sell foods that have a natural pH of 4.6 or less including: sweet or dill pickles, tomatoes, salsa, apples, cherries, grapes, plums, peaches, flavored vinegars, and naturally fermented foods such as sauerkraut, pickles, and kimchi.

Ms. Garden-Robinson stated that home-baked foods that individuals may sell include: lefse, bread, rolls, fruit pies, candies and confectioneries, and cookies and bars. She explained that these goods have a low water content and that pH is not a concern for baked goods. She stated that home-baked goods which individuals are not allowed to sell include foods that require refrigeration and are high in moisture and protein such as custards, meringue-topped pies or pastries, kuchen, pumpkin pies, cream pies, or other pastries or baked goods requiring temperature control.

Ms. Garden-Robinson explained that certain food products cannot be sold including home-canned low acid foods such as peas, beets, green beans, and carrots. She stated that fresh-processed (not canned) foods that require refrigeration such as fresh salsa or pesto also may not be sold. She explained that home-canned fish, pickled eggs, meat are also not allowed in North Dakota, as well as any non-acidified foods processed by a boiling water bath or home pressure cooker.

Ms. Garden-Robinson stated that home-canned foods can be very dangerous if not processed correctly. She stated that heat-resistant clostridium botulinum spores create a toxin which causes the deadly disease botulism. She explained that these microorganisms cannot be killed by normal boiling water at 212°F and are killed only at temperatures above 240°F, a temperature only possible through pressure canning or pressure processing. She listed a number of low-acid canned foods linked to

botulism as well as luncheon meats, ham, sausage, stuffed eggplant, lobster, and smoked and salted fish.

Ms. Garden-Robinson stated that several foods are regulated under USDA and FDA guidelines and are not allowable for sale. She explained that these include fish, dairy, poultry, and meat products such as smoked fish, butter, raw milk, jerky, and potentially hazardous products such as garlic and oil mixtures or other flavored oils.

Ms. Garden-Robinson informed the Commission that there is required signage for all cottage food products sold in North Dakota that state that canned goods/baked goods are homemade and have not been produced under state inspection. She explained that further labeling requirements include name of product, name of producer and contact information, date product was made or canned, and list of ingredients. She stated that a nutrition facts label is not required for small businesses but can be developed with assistance from NDSU extension upon request.

Mr. Evert asked a clarifying question as to whether potatoes and cabbage, as seen in the list of foods not allowed, and sauerkraut, which was listed as allowed, were listed correctly in the fact sheet. Ms. Garden Robinson answered that canned potatoes are not allowed unless the pH has been reduced to 4.6 or less. She explained that sauerkraut is allowed because fermented foods are naturally acidic and there is no risk of botulinum.

Ms. Myrdal asked what the major differences were between cottage food laws in North Dakota and Minnesota. Ms. Garden-Robinson stated that Minnesota has training and registration requirements for cottage food producers and also requires a food processing authority to process reviews for acidified foods and other goods. Ms. Driessen added that a simple pH test is all that is needed for the majority of cottage foods rather than going through a food processing authority. Ms. Garden-Robinson stated that approximately 25 pH readers have been purchased for use by counties throughout the state of North Dakota.

Ms. Myrdal asked whether the dollar amount tied to Tier I (less than \$5,000) and Tier II (\$5,000 to \$18,000) producers in Minnesota refer to just sales in Minnesota or include out-of-state sales as well. Ms. Driessen responded that certain canned foods may only be produced and sold in Minnesota but that certain baked goods could be sold across state lines. She stated that any dollar amounts for Tier I and Tier II include total sales, including out-of-state sales.

Ms. Myrdal asked what the Commission could do to better provide information and resources for cottage food producers wishing to sell in both Minnesota and North Dakota. Ms. Grant and Ms. Gold asked for further clarification for requirements for cottage food producers in Clay County who may want to sell in Cass County. Ms. Garden-Robinson answered that this should not be too much of an issue for out-of-state producers to sell in North Dakota, as the state has no formal training or registration requirements. She stated that as long as out-of-state producers follow the North Dakota Department of Food and Lodging fact sheet, they should be fine to sell in the state.

Ms. Myrdal stated she had seen an interest in farmers market vendors selling kombucha, a fermented black or green tea drink, and wondered if it fell under cottage food laws. Ms. Garden-Robinson replied that kombucha should be fine as long as producers test the pH before selling.

6b. Cottage Food Laws Blueprint

Ms. Baker informed the Commission that the Steering Committee had developed a new urban agriculture blueprint examining cottage food laws. She iterated that cottage food laws are regulations applying to small-time producers including individuals that bake, pickle, can, or dry certain low-risk foods to sell directly to consumers in a non-commercial kitchen. She explained

that cottage food laws are clearly defined in Moorhead and Clay County because of Minnesota Cottage Food Law, but are not addressed in Fargo, West Fargo, or Cass County. She stated that North Dakota does provide guidance for cottage food goods as presented by Ms. Garden-Robinson in the prior presentation but that there are no specific city or county ordinances. Ms. Myrdal added that jurisdictions have the opportunity to be more strict than state guidelines but that all local and county jurisdictions follow state guidelines.

Ms. Baker explained the framework for evaluating cottage food laws including health, environment, social, and economic aspects. She explained several benefits of cottage foods include greater access to locally produced foods, a reduction in food mileage required to transport goods, a reduction in food waste, less nutrients lost in food transport due to the short transport time from farm to table, and the forging of closer relationships between producers and buyers. She explained that concerns include the risk of foodborne illnesses and the risk of incorrectly labeling products or allergens.

Ms. Baker stated that the blueprint outlines several risk prevention strategies for cottage foods including: inspection of home kitchens and licensing of cottage food producers, food safety training and hygiene training, vendor education of food allergens, labeling, and a provision of a pre-determined list of allowed 'not potentially hazardous' foods. She iterated several recommendations detailed in the blueprint including that cottage food laws be easily found and interpreted, amending the FDA Food Code, and developing laws that are lenient enough to remove barriers to producers while ensuring the safety of the consumer. She stated that both North Dakota and Minnesota have easily accessible information regarding cottage food requirements and preservation techniques.

Ms. Baker concluded by saying that she could add a table or appendix that clarifies the registration and training requirements in Minnesota and how there are no requirements in North Dakota. Chair Rasmussen stated this would be reasonable information to include before approval.

Ms. Grant asked a clarifying question about the blueprint that stated that cottage foods produced in either North Dakota or Minnesota cannot be sold out-of-state. Ms. Driessen stated that a producer in North Dakota may register with the State of Minnesota to sell goods in Minnesota so long as they are not acidified canned goods. She iterated that acidified canned goods can only be produced and sold in Minnesota but baked goods can be produced and sold out-of-state and vice versa so long as individuals are registered with the Minnesota Department of Agriculture.

Mr. Thorstad asked whether cottage food laws were an issue that cities or the counties should address as the City of West Fargo looks to Fargo Cass Public Health to provide its food inspection and safety services. Grant Larson, Director of Environmental Health at Fargo Cass Public Health, answered that they operate under a Memorandum of Understanding (MOU) with the North Dakota Department of Food and Lodging and that the county follows guidelines as laid out in the fact sheet presented earlier to the Commission. He explained that a state statute for cottage food laws would need to be passed first but stated that no such legislation had been presented to the legislature to date. He explained that if the Commission wanted to make a recommendation to a state legislator who could bring the issue to the attention of the legislature, it would need to be submitted by the end of January.

Ms. Gold asked a clarifying question that acidified canned goods produced in Minnesota cannot be sold out-of-state. Mr. Larson stated that this is correct but that Fargo Cass Public Health only looks at cottage foods sold at farmers markets. She stated that it was her belief that there may not be enough clarity around the issue and that cottage food producers from Minnesota may be selling restricted acidified canned goods to individuals in North Dakota on a regular basis.

Ms. Grant asked whether it was federal guidelines that restricted acidified canned goods from being sold out-of-state or state guidelines, such as Minnesota’s regulations. Chair Rasmussen stated this may be an issue requiring further research. Mr. Evert added that he wondered why Minnesota would object to acidified canned goods being sold across state lines. Ms. Baker said she would look into the issue.

Ms. Grant asked whether Ms. Baker had spoken to any cottage food producers about their perspectives or needs on the local level. Ms. Baker stated that she had not reached out to anyone but that she had personal experience on this issue. She stated that she would try to do a little more community outreach before the next Commission meeting.

Ms. Myrdal concluded that it may be helpful to lay out the direct differences between Minnesota and North Dakota to provide better guidance for cottage food producers in the area.

6c. Public Input

Chair Rasmussen informed the audience that time would be allotted for public comments on cottage food laws and the information presented by Ms. Driessen and Ms. Garden-Robinson.

No public comments were made.

6d. Commission Discussion

Chair Rasmussen asked if Commission members had any further comments or questions on cottage food laws or the information presented.

Chair Rasmussen iterated that a lot of important information was brought forward for consideration but that there should be further discussions to help clarify questions regarding cottage food issues at the next meeting.

7. Final Selection of At-Large Commission Member

Chair Rasmussen informed the Commission and the audience that Chris Olson had been selected as the next at-large member to the Cass Clay Food Commission. He congratulated and welcomed Mr. Olson to the Commission.

Chair Rasmussen explained that, due to a prior engagement, he would turn the meeting over to Ms. Myrdal to conclude.

Chair Rasmussen and Jenny Mongeau left at 11:40 AM.

8. Public Comment Opportunity

Ms. Myrdal informed the Commission that time would be allotted for public comments.

No public comments were made.

9. Commission and Steering Committee Roundtable

Ms. Myrdal asked for the Commission and the Steering Committee to share any additional updates.

Ms. Baker thanked the Commission and presenters for their assistance and feedback regarding the cottage food laws blueprint.

Ms. Haugen shared that the International Potluck – Growing and Sharing Together would be held on January 26 from 5:00 to 8:30 PM at Olivet Lutheran Church in Fargo. She stated that many people who assist with community gardens in the area would be there and that the event is open to the public.

Ms. Gold explained the University of Minnesota Northwest Regional Sustainable Development Partnership is looking for grant proposals for local foods projects which focus on sustainable farming techniques, pollinator health, season extenders, and other related projects. She stated that people may contact her or Linda Kingery, Executive Director, for more information.

Mr. Evert asked a clarifying question regarding an earlier discussion on restrictive covenants and local ordinances and stated that it was his thought that whichever is more restrictive would take precedence. Ms. Lipetzky stated that this is correct.

10. Commission Action Steps

Ms. Myrdal informed the Commission that, due to the growth, excitement, and interest in farmers markets in the region, there would be a planning and networking meeting for farmers markets on February 7 from 4:00 to 6:00 PM at Fargo Cass Public Health. She stated that the beginning of this meeting would be used to discuss food safety regulations and cottage food laws in Cass and Clay Counties. She explained that the meeting would also include speed sessions on topics such as how to safely sample food, how to merchandize booths to maximize sales, how to effectively use social media, and how to create a sense of place and community. She stated that farmers markets spokespersons would be there to provide brief updates for the season for local sellers and producers. She stated that the Great Plains Food Bank would also be on hand to provide an update on how they have worked with the Red River Market to distribute unsold produce to their partner agencies.

Ms. Myrdal stated that the next meeting would be held on March 8, 2017.

Ms. Myrdal adjourned the meeting at 11:48 AM.

Cottage Food Laws

This issue brief will provide background information related to cottage food laws and address the common concerns and benefits from a health, environment, social, and economic standpoint. Appendices have been provided to share the cottage food laws of regional jurisdictions, as well as example policy language from other jurisdictions.

Background

Cottage food laws are regulations applying to small-time producers including individuals that bake, pickle, can, or dry certain low risk foods to sell directly to the consumer in a non-commercial kitchen. These low-risk foods are often referred to as “non- potentially hazardous foods.” Some examples include: pickles, baked goods, jams, jellies, and honey which do not present the same food safety risks as other processed foods. Using a pH level as an indicator of low risk is common. A certain level of acidity is required in this case (see Attachment 1). Through standardized cottage food laws small scale food processors will have easier access to markets for their homemade jams, jellies, baked and canned goods.¹

With the many benefits of Cottage Food Laws (see Table 2), individuals are able to become involved and join together within the community through relationships built by producers and buyers. A vendor at a farmer’s market is one example of a community based producer. The food items available at the farmer’s market are usually classified as low risk foods. The producer must sell directly to the customer and not through a third party distributor such as a grocery store or through another individual, as these regulations apply only to individuals and not businesses. A cottage food producer cannot apply as a Limited Liability Corporation (LLC) or operate as any other type of business, even within the home.

Cottage Food Laws are created at the federal and state levels. According to federal regulations, canned goods cannot cross state lines, but other goods covered under the Cottage Food Exemption can be sold across state lines, as long as they meet applicable state laws or regulations.² The Minnesota Cottage Food Laws require producers coming from outside of Minnesota to sell non-potentially hazardous foods (i.e. not canned goods) to register with the Minnesota Department of Agriculture.³ Producers from out of state that wish to sell in North Dakota must follow regulations provided by the North Dakota Department of Health.⁴ Contact information for regulatory bodies in Minnesota and North Dakota can be found in Appendix B.

Table 1 denotes if municipalities or counties have additional requirements or require permitting. If no additional requirements are noted, jurisdictions defer to state laws, regulated by North Dakota Department of Health in Fargo and Cass County, and the Minnesota Department of Agriculture in Moorhead and Clay County.

¹ Department of Agriculture & Rural Development. 2016. *Michigan Cottage Foods Information*. [accessed 10 November 2016]. http://www.michigan.gov/mdard/0,4610,7-125-50772_45851-240577--,00.html

² US Government Publishing Office. 2017. <http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=fea036e06a37182d500ccc0211adee50&mc=true&r=PART&n=pt21.2.108>

³ The Office of the Revisor of Statutes. 2016. <https://www.revisor.mn.gov/statutes/?id=28A.152#stat.28A.152.2>

⁴ North Dakota Department of Health. Fact Sheet for Certain Home-Processed, Home-Baked, and Home-Canned Goods. http://www.ndhealth.gov/foodlodging/pdf/proof_farmers_market_ruling.pdf

Table 1. Summary of Cottage Food Law approval in local jurisdictions (as of October 2016)

Moorhead	Dilworth	Clay County	Fargo	West Fargo	Cass County
Not addressed*	Not addressed	Not addressed	Not addressed	Not addressed**	Not addressed

*Before registering with the Minnesota Department of Agriculture (MDA), individuals are required to take an approved food safety course, and training is required every three years thereafter. Individuals intending to sell foods under the Cottage Food Exemption must register with the MDA each year.⁵

**Cottage Food Law can be classified under the term “other food service establishment”

Benefits and Concerns

Table 2. Framework for evaluating cottage food law

DOMAIN	BENEFIT	CONCERN
Health	<p>More homemade foods will be available in the community, thus increasing the amount of healthy foods available to community members</p> <p>Less nutrients lost in food transport due to short time from farm to table</p> <p>Higher amount of vitamins A, B, C, and E⁶</p>	<p>Risk of foodborne illness</p> <p>Risk of allergic reactions</p> <p>Risk of incorrectly labeling products or allergens</p>
Environment	<p>Provides residents greater access to locally produced foods, reducing “food miles”</p> <p>Incentivizes a reduction in food waste by encouraging and allowing home growers to preserve their excess produce for sale</p> <p>Farms reuse natural resources to sustain environmental conditions, such as fertilizing soil and protecting natural water resources⁷</p> <p>Provides natural habitats for animals and wildlife relating to farm production</p>	<p>Safety of customers in relation to traffic and parking access points</p> <p>Hazard increase due to clutter accumulation such as boxes or bins possibly leading to trip and fall accidents</p> <p>Unforeseen staff absences decrease the ability to provide a safe environment</p>
Social	<p>Allows for a closer relationship between producer and buyer</p>	<p>Variety of prices for goods</p> <p>Customers are less inclined</p>

⁵Minnesota Department of Agriculture. 2016. *Cottage food producer registration*. [accessed 09 November 2016]. <http://www.mda.state.mn.us/licensing/licensetypes/cottagefood.aspx>

⁶ Bishop, Tandis. 2010. *Health Benefits of Eating Local Produce*. [accessed 10 November 2016]. <https://www.downtoearth.org/environment/localhawaii/health-benefits-eating-local-produce>

⁷ Grubinger, Vern. 2010. *Ten Reasons for Growing Local Food*. University of Vermont Cultivating Healthy Communities Extension. [accessed 11 November 2016]. <https://www.uvm.edu/vtvegandberry/factsheets/buylocal.html>

	<p>Builds pride in the community through encouraging local producers</p> <p>Decrease F-M food insecurity</p> <p>Vendors value and benefit from interactions among consumers by providing feedback for improvement</p>	to purchase due to home canned goods being more expensive than local stores
Economic	<p>Direct economic benefit of increasing the amount of money that stays in the local economy.</p> <p>Can serve as a business incubator by reducing some of the start- up barriers for fledgling entrepreneurs and providing the indirect economic benefit of growing more local businesses.</p> <p>Encourage more people to grow food because the growers know they have an outlet to create value- added products from any excess fresh fruits and vegetables they produce.”⁸</p> <p>Opens opportunities for supplemental income for those working from the home</p> <p>Cottage food operations can meet local demand for locally produced and processed foods</p> <p>Reduces start-up cost for fledgling entrepreneurs by easing regulations on those producers</p> <p>Presents the opportunity for small food producers to earn more revenue from value-added products</p> <p>Increased income and potential jobs for the local and state economy</p>	Decreased small business sales due to increase of cottage food sales

Risk Prevention

- Inspection of home kitchens and licensing of cottage food producers
- Food safety or hygiene training for those selling cottage foods
- Vendor education on food allergen contamination
- Labels listing all ingredients and potential allergens
- Provision of a pre-determined list of allowed ‘not potentially hazardous’ foods

⁸ Condra, Alli. Cottage Food Laws in the United States. *Harvard Food Law and Policy Clinic*. August 2013.

Recommendations

- **Cottage food laws should be easily found and interpreted** - “By having difficult- to- find cottage food laws or hidden exemptions from the requirements for food establishments, states may cause cottage food operators to inadvertently break their state’s laws or lead potential cottage food operators to forego starting cottage food businesses.”
- **Amend the FDA Food Code** - States that accept the FDA recommended food code verbatim will create a ban on cottage food operations. To allow cottage food operations, “States must amend the adopted version of the FDA Food Code to allow cottage food operations.”⁹
- A balance must be found between cottage food laws that are lenient enough to remove barriers for the producer, while also being strict enough for the safety of the consumer.

Resource

If you have questions, please contact Kim Lipetzky with the Fargo Cass Public Health Office at 701-241-8195 or klipetzky@cityoffargo.com.

⁹ Harvard report, 2013. http://blogs.harvard.edu/foodpolicyinitiative/files/2013/08/FINAL_Cottage-Food-Laws-Report_2013.pdf

Appendix A: Cottage Food Laws in Local Jurisdictions

Moorhead, MN

By state law, cottage food sales are permitted with common restrictions (food safety course, training every three years, and registration with MDA).

Dilworth, MN

By state law, cottage food sales are permitted with common restrictions (food safety course, training every three years, and registration with MDA)..

Clay County, MN

By state law, cottage food sales are permitted with common restrictions (food safety course, training every three years, and registration with MDA).

Fargo, ND

Cottage food sales are not addressed in city code.

West Fargo, ND

Cottage food sales are not directly addressed in city code but can be classified as “other food establishment”.

Cass County, ND

Cottage food sales are not addressed in county code.

Appendix B: Minnesota and North Dakota Regulations

North Dakota

Table 3. Framework of North Dakota regulation¹⁰

STATE REGULATION	NORTH DAKOTA
Regulating Body	North Dakota Department of Health Kenan Bullinger, Director Division of Food and Lodging North Dakota Department of Health 701.328.1291
Foods Allowed	Pickles, vegetables or fruits having an equilibrium pH value of 4.6 or lower and non-temperature-controlled baked goods that do not require refrigeration. (See Attachment 1)
Labeling Requirement	Must include the following statement using a font size that is prominent, conspicuous, and easy to read. <i>“These food products were produced in an uninspected home kitchen where major food allergens may also have been handled and prepared, such as tree nuts, peanuts, eggs, soy, wheat, milk, fish, and crustacean shellfish.”</i> The seller must display a sign or placard at the point of sale which states: <i>These canned goods/baked goods are homemade and not subject to state inspection.</i>
Sales Limit	N/A
Training Required	N/A
Registration or Permit Required	N/A
Sales Location	The food products can only be sold at community and nonprofit events or farmers markets located in North Dakota. This includes such events as: county fairs, nonprofit and charitable events, public spirited and/ or community celebrations, and farmers markets and roadside stands. It does NOT include: Craft shows, food festivals, or other for profit events nor sales to other businesses; interstate or Internet sales, or sales from one’s home or business.

Minnesota

Table 4. Framework for Minnesota regulation¹¹

STATE REGULATION	MINNESOTA
Regulating Body	Minnesota Department of Agriculture mda.cottagefood@state.mn.us Cottage food registration: 651.201.6081
Foods Allowed	NON-potentially hazardous food (such as baked goods, certain jams and jellies) and/or home canned pickles, vegetables, or fruits with a pH of 4.6 or lower.
Labeling Requirement	Yes, including producers name and address, the date produced, and the

¹⁰ North Dakota Department of Health. *Home prepared foods/farmers markets*. [accessed 11 November 2016]. www.ndhealth.gov/foodlodging/pdf/proof_farmers_market_ruling.pdf

¹¹ Minnesota Department of Agriculture. 2016. *Cottage food producer registration*. [accessed 09 November 2016]. <http://www.mda.state.mn.us/licensing/licensetypes/cottagefood.aspx>

	ingredients, including potential allergens.
Sales Limit	Sales cannot exceed \$18,000 in a calendar year, and the producer must pay a fee if they sell between \$5,000 and \$18,000 dollars per year.
Training Required	State mandated training is required
Registration or Permit Required	Registration as a cottage food producer with the Minnesota Dept of Agriculture is required
Sales Location	Home sales are permitted without another business residing that establishment. Sales may also be from farmer's markets, community events, or over the Internet. Canned goods cannot be sold across state lines.

Appendix C: Regional Ordinances

Wyoming¹²

HB 0016

Section 1

35-7-110. Definitions.

As used in this act:

(xxviii) "Cottage food establishment" means a licensed establishment in a person's private home utilizing home style equipment in producing a non-potentially hazardous food for sale or distribution to the general public;

(xxix) "Function" means any gathering or occasion;

(xxx) "Not potentially hazardous food" means any food which does not require time or temperature control for safety to limit pathogenic microorganism growth or toxin formation. The natural pH or the final pH of acidified food must be 4.6 or less;

35-7-124. License required; exemptions; electronic transmittals.

(a) Any person processing, storing or preparing any food for sale shall obtain a license from the department of agriculture or a local health department. The license is not transferable, shall be renewed on an annual basis and shall be prominently displayed in the establishment. No food establishment shall serve, hold for sale or sell food to the public without a valid license. An agricultural producer shall be exempt from the licensure requirement in this section for processing, distributing, storing or sale of any raw agricultural commodity he produces.

(b) Written application for a new license shall be made on a form approved by the department of agriculture and provided by the department of agriculture or the local health department and shall be signed by the applicant. License requirements and fees for temporary food events operated by nonprofit organizations shall be waived. Licenses shall expire one (1) year after the date of issuance unless suspended or revoked. Licenses may be renewed each year upon application to the department or local health department. The director shall establish license categories and fees by rule and no fee shall exceed two hundred dollars (\$200.00).

(e) The provisions of subsection (a) of this section shall not apply to food operators or kitchens in private homes that prepare food that is not potentially hazardous and prepared for sale or use at farmers' markets, roadside stands, private homes and at functions including, but not limited to those operated by not for profit charitable or religious organizations.

Section 2

This act is effective July 1, 2009.

South Dakota¹³

HB 1222 | March 2010

Section 1.

Person selling whole, intact fresh fruits or vegetables at a farmer's market, roadside stand, or similar venue is required to be licensed pursuant to this chapter.

Section 2.

¹² State of Wyoming, House Bill Number HB0016.

<http://www.pickyourown.org/PYO.php?URL=http%3A%2F%2Flegisweb.state.wy.us/2009/Introduced/HB0016.pdf>

¹³ South Dakota Legislature. House Bill 1222. <http://sdlegislature.gov/docs/legsession/2010/Bills/HB1222ENR.pdf>

No person selling non-temperature-controlled baked goods or non-temperature-controlled home-processed canned goods at a farmer's market, roadside stand, or similar venue is required to be licensed pursuant to this chapter. However, any non-temperature-controlled baked goods or non-temperature-controlled home-processed canned goods sold at a farmer's market, roadside stand, or similar venue shall meet the requirements of section 3, if applicable, and section 4 of this Act.

Section 3.

No canned good may be sold unless the pH level is 4.6 or less or the water activity level is .85 or less.

Section 4.

No baked good or canned good may be sold unless it has a label that includes the following information:

- (1) Name of the product;
- (2) Producer and contact information;
- (3) Date the product was made or processed;
- (4) Ingredients; and
- (5) Disclaimer. The disclaimer shall state: "This product was not produced in a commercial kitchen. It has been home-processed in a kitchen that may also process common food allergens such as tree nuts, peanuts, eggs, soy, wheat, milk, fish, and crustacean shellfish."

In 2011, South Dakota amended the above bill to include the sales of non-temperature-controlled baked goods from licensing requirements. This allows direct sales from home, but limits the yearly sales to \$5,000. This does not include jams/preserves, but does include candy and confection items. Shelf stabilization without refrigeration is needed, but lab testing is not.

HB 1240

Section 1.

Any person selling non-temperature-controlled baked goods from the person's own primary residence is exempt from the licensing and license fee provisions of this chapter under the following conditions:

- (1) Any non-temperature-controlled baked goods sold from a person's own primary residence is for consumption off the premises;
- (2) Any non-temperature-controlled baked goods sold from a person's own primary residence meets the requirements of HB 1222; and
- (3) The total gross receipts from the sale of non-temperature-controlled baked goods from the person's own primary residence does not exceed five thousand dollars in a calendar year.

Washington¹⁴

Section 20.

Requirements—Authority of director.

- (1) The director may adopt, by rule, requirements for cottage food operations. These requirements may include, but are not limited to:
 - (a) The application and renewal of permits under RCW [69.22.030](#);
 - (b) Inspections as provided under RCW [69.22.040](#);
 - (c) Sanitary procedures;
 - (d) Facility, equipment, and utensil requirements;
 - (e) Labeling specificity beyond the requirements of this section;
 - (f) Requirements for clean water sources and waste and wastewater disposal; and
 - (g) Requirements for washing and other hygienic practices.

¹⁴Washington Legislature. Chapter 69.22 RCW. <http://apps.leg.wa.gov/rcw/default.aspx?cite=69.22&full=true#69.22.050>

- (2) A cottage food operation must package and properly label for sale to the consumer any food it produces, and the food may not be repackaged, sold, or used as an ingredient in other foods by a food processing plant, or sold by a food service establishment.
- (3) A cottage food operation must place on the label of any food it produces or packages, at a minimum, the following information:
 - (a) The name and address of the business of the cottage food operation;
 - (b) The name of the cottage food product;
 - (c) The ingredients of the cottage food product, in descending order of predominance by weight;
 - (d) The net weight or net volume of the cottage food product;
 - (e) Allergen labeling as specified by the director in rule;
 - (f) If any nutritional claim is made, appropriate labeling as specified by the director in rule;
 - (g) The following statement printed in at least the equivalent of eleven-point font size in a color that provides a clear contrast to the background: "Made in a home kitchen that has not been subject to standard inspection criteria."
- (4) Cottage food products may only be sold directly to the consumer and may not be sold by internet, mail order, or for retail sale outside the state.
- (5) Cottage food products must be stored only in the primary domestic residence.

Section 30.

Permits, permit renewals.

- (1) All cottage food operations must be permitted annually by the department on forms developed by the department. All permits and permit renewals must be made on forms developed by the director and be accompanied by an inspection fee as provided in RCW [69.22.040](#), a seventy-five dollar public health review fee, and a thirty dollar processing fee. All fees must be deposited into the food processing inspection account created in RCW [69.07.120](#).
- (2) In addition to the provision of any information required by the director on forms developed under subsection (1) of this section and the payment of all fees, an applicant for a permit or a permit renewal as a cottage food operation must also provide documentation that all individuals to be involved in the preparation of cottage foods [cottage food products] have secured a food and beverage service worker's permit under chapter [69.06](#) RCW.
- (3) All cottage food operations permitted under this section must include a signed document attesting, by opting to become permitted, that the permitted cottage food operation expressly grants to the director the right to enter the domestic residence housing the cottage food operation during normal business hours, or at other reasonable times, for the purposes of inspections under this chapter.

Section 40.

Basic hygiene inspections.

- (1) The permitted area of all cottage food operations must be inspected for basic hygiene by the director both before initial permitting under RCW [69.22.030](#) and annually after initial permitting. In addition, the director may inspect the permitted area of a cottage food operation at any time in response to a foodborne outbreak or other public health emergency.
- (2) When conducting an annual basic hygiene inspection, the director shall, at a minimum, inspect for the following:
 - (a) That the permitted cottage food operator understands that no person other than the permittee, or a person under the direct supervision of the permittee, may be engaged in the processing, preparing, packaging, or handling of any cottage food products or be in the home kitchen during the preparation, packaging, or handling of any cottage food products;

- (b) That no cottage food preparation, packaging, or handling is occurring in the home kitchen concurrent with any other domestic activities such as family meal preparation, dishwashing, clothes washing or ironing, kitchen cleaning, or guest entertainment;
- (c) That no infants, small children, or pets are in the home kitchen during the preparation, packaging, or handling of any cottage food products;
- (d) That all food contact surfaces, equipment, and utensils used for the preparation, packaging, or handling of any cottage food products are washed, rinsed, and sanitized before each use;
- (e) That all food preparation and food and equipment storage areas are maintained free of rodents and insects; and
- (f) That all persons involved in the preparation and packaging of cottage food products:
 - (i) Have obtained a food and beverage service worker's permit under chapter [69.06](#) RCW;
 - (ii) Are not going to work in the home kitchen when ill;
 - (iii) Wash their hands before any food preparation and food packaging activities; and
 - (iv) Avoid bare hand contact with ready-to-eat foods through the use of single-service gloves, bakery papers, tongs, or other utensils.
- (3) The department shall charge an inspection fee of one hundred twenty-five dollars for any initial or annual basic hygiene inspection, which must be deposited into the food processing inspection account created in RCW [69.07.120](#). An additional inspection fee must be collected for each visit to a cottage food operation for the purposes of conducting an inspection for compliance.
- (4) The director may contract with local health jurisdictions to conduct the inspections required under this section.

Section 50.

Annual gross sales.

- (1) The annual gross sales of cottage food products may not exceed twenty-five thousand dollars. [Annual gross sales increased from \$15,000 to \$25,000 on March 21, 2016.]¹⁵ The determination of the maximum annual gross sales must be computed on the basis of the amount of gross sales within or at a particular domestic residence and may not be computed on a per person basis within or at an individual domestic residence.
- (2) If gross sales exceed the maximum allowable annual gross sales amount, the cottage food operation must either obtain a food processing plant license under chapter [69.07](#) RCW or cease operations.
- (3) A cottage food operation exceeding the maximum allowable annual gross sales amount is not entitled to a full or partial refund of any fees paid under RCW [69.22.030](#) or [69.22.040](#).
- (4) The director may request in writing documentation to verify the annual gross sales figure.

Section 60.

Access to permitted areas of domestic residence housing cottage food operations—Authority of director.

- (1) For the purpose of determining compliance with this chapter, the director may access, for inspection purposes, the permitted area of a domestic residence housing a cottage food operation permitted by the director under this chapter. This authority includes the authority to inspect any records required to be kept under the provisions of this chapter.
- (2) All inspections must be made at reasonable times and, when possible, during regular business hours.
- (3) Should the director be denied access to the permitted area of a domestic residence housing a cottage food operation where access was sought for the purposes of enforcing or administering this chapter, the director may apply to any court of competent jurisdiction for a search warrant authorizing access to the

¹⁵Washington State Department of Agriculture. April 15, 2016. *Cottage Food Operation*. [accessed November 25, 2016]. <http://agr.wa.gov/FoodAnimal/CottageFoodOperation/>

permitted area of a domestic residence housing a permitted cottage food operation, upon which the court may issue a search warrant for the purposes requested.

(4) Any access under this section must be limited to the permitted area and further limited to the purpose of enforcing or administering this chapter.

Section 70.

Cottage foods operations permit—Denial, suspension, or revocation.

(1) After conducting a hearing, the director may deny, suspend, or revoke any permit provided for in this chapter if it is determined that a permittee has committed any of the following acts:

(a) Refused, neglected, or failed to comply with the provisions of this chapter, any rules adopted to administer this chapter, or any lawful order of the director;

(b) Refused, neglected, or failed to keep and maintain records required by this chapter, or to make the records available when requested pursuant to the provisions of this chapter;

(c) Consistent with RCW [69.22.060](#), refused the director access to the permitted area of a domestic residence housing a cottage food operation for the purpose of carrying out the provisions of this chapter;

(d) Consistent with RCW [69.22.060](#), refused the department access to any records required to be kept under the provisions of this chapter; or

(e) Exceeded the annual income limits provided in RCW [69.22.050](#).

(2) The director may summarily suspend a permit issued under this chapter if the director finds that a cottage food operation is operating under conditions that constitute an immediate danger to public health or if the director is denied access to the permitted area of a domestic residence housing a cottage food operation and records where the access was sought for the purposes of enforcing or administering this chapter.

Section 80.

Application of administrative procedure act.

The rights, remedies, and procedures respecting the administration of this chapter, including rule making, emergency actions, and permit suspension, revocation, or denial are governed by chapter [34.05](#) RCW.

Section 90.

Penalties.

(1)(a) Any person engaging in a cottage food operation without a valid permit issued under RCW [69.22.030](#) or otherwise violating any provision of this chapter, or any rule adopted under this chapter, is guilty of a misdemeanor.

(b) A second or subsequent violation is a gross misdemeanor. Any offense committed more than five years after a previous conviction shall be considered a first offense.

(2) Whenever the director finds that a person has committed a violation of any of the provisions of this chapter, and that violation has not been punished pursuant to subsection (1) of this section, the director may impose upon and collect from the violator a civil penalty not exceeding one thousand dollars per violation per day. Each violation shall be a separate and distinct offense.

Residential Gardening: Front Yard & Boulevard Gardens

This issue brief will provide background information related to residential gardening and address the common concerns and benefits from a health, environmental, social, and economic standpoint. Appendices have been provided to share how regional jurisdictions are managing their residential gardening as well as example policy language from other jurisdictions.

Background

Since the 1940's American suburbia has been defined by white picket fences and perfectly green turfgrass lawns. It is estimated that turfgrass lawns in the United States cover more acres of land than corn, alfalfa, soybeans, orchards, vineyards, cotton, pastures, wheat, and hay combined, totalling around 40.5 million, and use more water than the top eight agricultural commodities combined.¹ Not only do turfgrass lawns use tremendous resources (water, chemicals, etc.) but they also take up space that could otherwise be used to grow food.

Food Not Lawns is an organization seeking to build community through growing and sharing food urban neighborhoods. With local chapters all over the country, Food Not Lawns hosts seed sharing gatherings, gardening workshops, and provides detailed information for how to transform your lawn into a beautiful organic growing space. This transformation not only benefits homeowners and neighborhoods with access to healthy food, it also creates community and encourages people to reconnect with how their food is grown regardless of where they live.² Urban access to local, healthy food can be easily improved by allowing and encouraging residents to grow food in their front and back yards.

Some cities across the United States also allow boulevard gardening. Boulevards are the space between sidewalks and streets, and can be owned by the resident or the jurisdiction. Minneapolis and St. Paul allow boulevard gardening. The cities provide residents with a fact sheet defining species that are best suited for boulevards with considerations such as height, spreading, chance for runoff, etc. Appendix C provides a list of species that can be successfully grown in boulevards. Because the primary purpose of boulevards is as utility corridors, residents are to understand that if their provider needs to access the boulevard, the garden may be damaged.

Table 1. Summary of residential gardening approval in local jurisdictions*

Moorhead	Dilworth	Clay County	Fargo	West Fargo	Cass County
Permitted**	Permitted	Not addressed	Permitted***	Permitted in select zones	Not addressed****

*This table only addresses regulations at the county and city level. Some living communities, associations, or covenants further regulate yard use.

¹ Diep, Francie. 2011. *Lawn vs. Crops in the Continental US*. Science Line. URL: <http://scienceline.org/2011/07/lawns-vs-crops-in-the-continental-u-s/>

² Food Not Lawns. 2015. URL: <http://www.foodnotlawns.com/>

***Section 3.3.3 of the City Code states that 30% or more of the land cannot be weeds exceeding the height of 8 inches or an area of 250 contiguous square feet and this section also allows for property owners to submit a natural lawn application for grasses and other growth over 8 inches in height.*

****Residential gardens (both commercial and non-commercial) are permitted uses within city limits. 11.0807 of the City Municipal Code states that “noxious or other weeds’ exceeding the height of 8 inches are deemed a public nuisance.” Additionally, landscaping may not be allowed “to impede vision between a height of 2 feet and 8 feet above curb grade within the required corner visibility area of a street intersection or driveway intersection with a street” (per ordinance 20-0706).*

*****The county does not have regulations pertaining to residential gardening. If covered, they would be addressed in each separate township zoning ordinance. Generally, gardens are permitted in most land use zones.*

Table 2. Summary of boulevard gardening approval in local jurisdictions (as of October 2015)

Moorhead	Dilworth	Clay County	Fargo	West Fargo	Cass County
Not permitted*	Not addressed	Not addressed	Not permitted**	Not permitted	Not addressed

**Minimal landscaping (around mailboxes, trees, etc.) is permitted, but gardens or other significant landscaping projects are not permitted in the boulevard for the following reasons: the primary use of boulevards is a utility corridor; installation of rain gardens, for example, typically require excavation of soils/replacement with engineered soils and may include installation of an underdrain, which could cause conflict with utilities; pedestrian and vehicular site visibility; and overall look of a neighborhood.*

***Boulevards are typically located within the right-of-way, which is not private property. In Section 20-0705 of the Land Development Code, it is noted that all areas of the right-of-way for streets and utilities not covered by concrete, asphalt or such other material for vehicular, bicycle or pedestrian travel shall be covered by grass, unless otherwise approved by the Zoning Administrator.*

Table 3. Framework for evaluating residential gardening

DOMAIN	BENEFIT	CONCERN
Health	Stress-relief by lowering cortisol levels ³ Moderately-intense exercise decreases stroke and heart attack risk in seniors ⁴ May reduce risk of dementia or Alzheimer’s ⁵ Boosts mental health; may improve depression symptoms ⁶ Increases vitamin D from sun exposure	Risk of foodborne illness

³ Van Den Berg AE, Custers, M. 2011. Gardening Promotes Neuroendocrine and Affective Restoration from Stress. Journal of Health Psychology. 16(1): 3-11. doi: 10.1177/1359105310365577

⁴ Topping, A. 2013. Gardening as good exercise in cutting hear attack risk, study shows. The Guardian [online]. [accessed 09 April 2015]. <http://www.theguardian.com/society/2013/oct/28/gardening-exercise-cutting-heart-attack-risk-diy-60-plus>

⁵ Simons LA, Simons J, McCallum J, Friedlander Y. 2006. Lifestyle factors and risk of dementia: Dubbo Study of the elderly. Medical Journal of Australia. 184(2):68-70.

⁶ Harding A. 2011. Why gardening is good for your health. CNN [online]. [accessed 09 April 2015]. <http://www.cnn.com/2011/HEALTH/07/08/why.gardening.good/>

	<p>Increases food security for residents</p> <p>Access to fresh, healthy food</p> <p>Promotes healthy eating</p> <p>Increased outdoor activity</p>	
Environment	<p>Plants help create cleaner air</p> <p>Filters rainwater</p> <p>Provides a diversity of urban plants for pollinators</p> <p>Increases beauty in neighborhood</p> <p>Reduces food miles travelled by allowing residents to grow much of their own food</p>	<p>Need to design gardens so the soil stays in the garden and does not wash into the street</p>
Social	<p>Increases awareness of the food cycle and connection to agriculture</p> <p>Provides a positive family activity</p> <p>Increase food access to the FM area</p> <p>Promotes positive social interactions</p> <p>Provides opportunity for community or neighborhood interaction</p> <p>Increased quantities of fresh produce donated to local organizations such as food pantries</p>	<p>Aesthetically unpleasing for some residents</p>
Economic	<p>Provides access to fresh fruits and vegetables for residents who may otherwise not have access</p>	<p>Jurisdiction cost of monitoring and addressing issues</p> <p>Boulevard gardens could be damaged if utility work needs to be done</p>

Additional Tools:

- “The Best Plants for 30 Tough Spots” University of Minnesota Extension. <http://www.extension.umn.edu/garden/yard-garden/landscaping/best-plants-for-tough-sites/docs/08464-complete.pdf>
- “Twin Cities Boulevard Gardening” <http://www.mppeace.org/downloads/boulevard.pdf>

Resources

If you have questions, please contact Kim Lipetzky with the Fargo Cass Public Health Office at 701-241-8195 or klipetzky@cityoffargo.com.

Appendix A: Residential Gardening in Regional Jurisdictions

Bismarck, ND

Residents cannot plant in the *sight triangle**. Also, vegetation must be higher than eight feet (like a tree) or lower than eight feet for people to back out of driveways safely. Boulevard gardening is not addressed in city ordinance besides no graveling in the boulevard.

**the triangle formed by measuring from the point of intersection of the two (2) property lines a distance of twenty-five (25) feet in both directions along the street right-of-way lines and connecting the points to form a sight triangle on the area of the lot adjacent to the street intersection*

Duluth, MN

The only restriction on front yard gardening is on front yard fence height (four foot maximum). Although there is no written policy, boulevard gardening is allowed as long as it does not interfere with the city sidewalk. Residents are supposed to receive verbal permission. They do not allow residents to use large rocks for landscaping, because they can damage snow plows.

Grand Forks, ND

No front yard gardening restrictions. Boulevard gardening is not allowed.

Lincoln, NE

No front yard gardening restrictions. As to boulevard gardening, residents are not allowed to have any vegetation higher than two feet six inches near the curb or pavement or in the sight triangle to keep driving views unobstructed. Only approved trees can be planted in this area, and vegetation may not extend over the sidewalk, curb, driveway, or alley.

Mankato, MN

No residential gardening restrictions. Boulevard gardening is not allowed unless approved by the city and approval is rare.

Rochester, MN

No front yard gardening restrictions. Boulevard gardens are not allowed. Should a resident like to plant anything on the boulevard, they must apply for a Natural Landscape Permit. Generally, the city likes to keep the boulevard clear so not many of these permits are approved.

Sioux Falls, SD

No restrictions for backyard gardens. In front yard, must have 90% "living ground cover." The Planning Department usually tells people that as long as something is growing, it is acceptable. Boulevards are to be maintained by residents; they are limited to "sod, seed or other living ground cover approved by the city" (§96.010 Right-of-way Landscaping). Additionally, fences or plants three feet in height above the street grade cannot be planted within ten feet of the curb line to prevent vision obstruction (§160.158 Driveway Safety Zone).

Appendix B: Example Ordinances

Des Moines, IA

ARTICLE VII. - GARDENS AND PLANTS ON CITY-OWNED RIGHT-OF-WAY AND CITY PROPERTY

Sec. 74-201. - Garden leases.

(a) Persons or entities desiring to plant or place flowers, plants, or shrubs in a permanent structure on any city right-of-way or city real property shall execute a garden lease which identifies all areas of the proposed planting or placement, and shall abide by the terms of such lease, including insurance and indemnification responsibilities, if any, established by the city risk manager. Persons or entities executing a garden lease shall be exempt from the permit requirements of section 102-660 of this Code.

(b) The garden lease shall be denied if such plantings or placement is likely to create a public danger or nuisance or would be harmful to existing trees, shrubs, flowers, plants or facilities, as determined by the city engineer.

(c) For purposes of this article, city right-of-way means the surface and space above and below any public street, boulevard or sidewalk, but does not include the border area as defined in section 102-1 of this Code and governed by section 102-2 of this Code.

(d) Persons or entities desiring to maintain city property that abuts their property or is located on neighboring property shall execute a lease which shall set forth the duties associated with the use of the property.

(O.14,314, 14,366)

Sec. 74-202. - Administration.

The park and recreation director shall be responsible for the administration of the garden leases. The director of the park and recreation department, or his or her designee, is authorized to execute garden leases on city right-of-way and other city real property on behalf of the city and may delegate any or all of his or her duties under this article.

Toronto, Ontario, Canada (pop. 2.6 million)

Below is an excerpt to the City's front yard landscaping bylaw. Vegetables are included. They have also promoted growing food anywhere in the city except near a major arterial road. This has been done by creating a Guide for Soil Testing and several Guides to Growing and Selling Fruit and Vegetables.

Section 7 – R1 Residential Zone (R1) of Zoning By-law No. 1-83 of the former City of York, as amended, is further amended by adding the following new subsection to subsection (3):

“(q) Front Yard Landscaping and Front Yard Soft Landscaping The following front yard landscaping and front yard soft landscaping provisions shall apply to a detached dwelling house:

(i) For lots with a frontage less than 6 metres, the front yard not covered by a permitted driveway shall be maintained as landscaping.

(ii) For lots with a frontage of 6 metres to less than 15 metres, a minimum of 50% of the front yard shall be maintained as landscaping.

(iii) For lots with a frontage of 15 metres and greater, a minimum of 60% of the front yard shall be maintained as landscaping.

(iv) A minimum of 75% of the front yard not covered by a permitted driveway shall be maintained as soft landscaping.

(v) For the purpose of this subsection, landscaping means trees, shrubs, grass, flowers, vegetables, and other vegetation, decorative stonework, walkways, patios, screening, or other horticultural or landscape-architectural elements, or any combination of these. Landscaping does not include driveways or parking areas, and directly associated elements such as curbs or retaining walls.

(vi) For the purpose of this subsection, soft landscaping means trees, shrubs, grass, flowers, vegetables, and other vegetation, but does not include hard surfaced areas such as but not limited to driveways, parking areas, decorative stonework, walkways, patios, screening, or other landscape-architectural elements.”

St. Paul, MN (pop. 294,873)

Chapter 105. - Care and Maintenance of Boulevards

Sec. 105.04. - Boulevard planting.⁷

Purpose.

It is the purpose and intent of the city to allow property owners to plant and maintain the boulevard areas adjoining their property in a manner which enhances and improves the aesthetic appearance of city streets, avenues and alleys.

Definitions.

- *Boulevard* shall mean the public right-of-way lying between the property line and sidewalk, and between the sidewalk and the roadway, or where no sidewalk exists, between the property line and the roadway.
- *Boulevard plantings* shall mean plantings that do not meet the definition of boulevard rain garden.
- *Boulevard rain garden* shall mean a landscaped depressed area that can hold stormwater runoff from impervious surfaces while it infiltrates into the soil below.
- *Drip line* shall mean an imaginary vertical line that extends from the outermost branches of a tree's canopy to the ground.
- *Noxious weeds* shall mean the annual, biennial and perennial plants which are deemed by the commissioner of agriculture to be injurious to public health, environment, public roads, crops, livestock and other property, as set forth in Minn. Rules 1505.0730, including but not limited to: *Convolvulus arvensis* (field bindweed), *Cannabis sativa* (hemp), *Rhus radicans* (poison ivy), *Euphorbia esula* (leafy spurge), *Sonchus arvensis* (perennial sow thistle), *Cirsium vulgare* (bull thistle), *Cirsium arvense* (Canada thistle), *Carduus nutans* (musk thistle) and *Carduus acanthoides* (plumeless thistle).

Plantings permitted.

A property owner in the city shall be permitted to plant, care for and maintain gardens on the boulevards adjacent to their property, subject to the restrictions set forth below.

- (1) Boulevard rain gardens shall be registered as described in [chapter 116](#) and authorized by the department of public works prior to construction, except for those authorized as part of a city street reconstruction project. Rain gardens that impact existing boulevard trees or the area within the drip line shall be reviewed and approved by the department of parks and recreation-forestry.
- (2) Boulevard rain garden slopes shall not exceed twenty-five (25) percent, the bottom depth shall not exceed six (6) inches below the elevation of adjacent hard surface, and there must be a two-foot wide level grass strip between the adjacent hard surface and top of slope. Excavations shall not occur within the drip line of boulevard trees.
- (3) Plantings may not exceed thirty-six (36) inches in height. Plantings within thirty (30) feet of any intersection as measured from the property line; or within five (5) feet of any alley, or driveway approached as measured from the end of the radius or within five (5) feet of a public utility fixture may not exceed eighteen (18) inches in height. Plantings shall be limited to eighteen (18) inches in height within ten (10) feet of the curb on street sections that do not have parking lanes, or on street sections or portions of street sections where "rush hour or 24-hour no parking" restrictions apply.
- (4) Plantings must be maintained in such a way that there is no overhang or encroachment onto the sidewalk, curb or street area.
- (5) Plantings may include flowers, vegetables and other plants, but in no event shall any noxious weed be planted or maintained.
- (6) No herbicides, pesticides and/or fertilizers may be used in the maintenance of gardens under this section without written approval of the city forester, which approval shall contain the type and amount of said herbicide, pesticide and/or fertilizer which is permitted.
- (7) No garden shall be planted on the boulevard without written documentation that the property owner has contacted "Gopher State One Call" for utility locations forty-eight (48) hours before digging, and has planned plantings which will not interfere with said utilities.

⁷ St. Paul, Minnesota code of ordinances. *Chapter 105. - care and maintenance of boulevards section 4.* [accessed 28 November 2016]. https://www.municode.com/library/mn/st._paul/codes/code_of_ordinances?nodeId=PTIILECO_TITXIISTISIBROTPUWA_CH105CAMABO_S105.04BOPL

Appendix C: Plant Examples for Boulevard Gardening⁸

Common Name	Height	Uses
Daffodil	6-24"	Perennial for front yard or boulevard
Daylily	1-3'	Beneficial for butterflies, boulevards
Blazing Star	2-5'	Drought tolerant, beneficial for pollinators, boulevards
Common Yarrow	12-30"	Good for boulevards as alternative to grass border
Pussy Toes	6"	Good for boulevards as alternative to grass border
Sedum	2-3", spreading	Good for boulevards as alternative to grass border
Thyme	2-5"	Good for boulevards as alternative to grass border
Dianthus	10-20"	High salt tolerance
Hosta	11-18"	Moderate salt tolerance
Bee Balm	<10" for dwarf varieties	Beneficial for pollinators and in rainwater gardens

⁸ The Best Plants for 30 Tough Sites. University of Minnesota Extension. 2007. URL: <http://www.extension.umn.edu/garden/yard-garden/landscaping/best-plants-for-tough-sites/docs/08464-complete.pdf>

ENGAGE

The Longspur Prairie Fund invites you to become part of a community vision for the ecological heritage of the Red River Valley. If you are pro-business, pro-farmer, pro-hunter, pro-science, and pro-nature like us, then join us and discover the pleasures of our local natural legacy. Donate, if you can. More importantly, spread the word and walk the land!



DECLARE YOUR SHARE

Visit our website
Get involved
Invest
Keep it real

OUR PARTNERS

- Local farmers, hunters, and business owners
- Biology and Environmental Studies Departments, Concordia College, Moorhead
- Energy and Environmental Research Center (UND)
- Nature Conservancy of Minnesota
- Ducks Unlimited Minnesota
- Minnesota Prairie Chicken Society

OUR ASSOCIATES

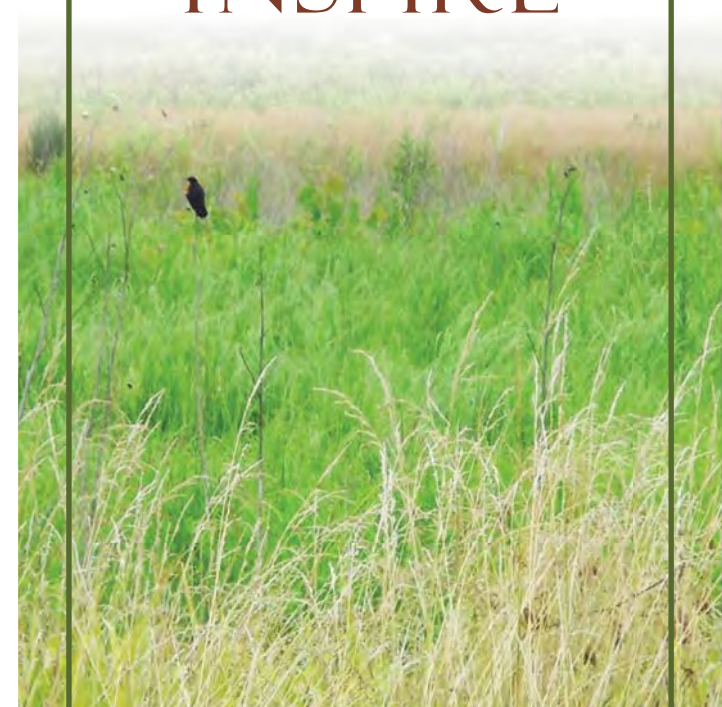
- The Audubon Society of Minnesota
- Department of Agriculture and Natural Resources, University of Minnesota, Crookston
- Minnesota Chapter of the Wildlife Society
- Minnesota Sharp-Tailed Grouse Society
- Minnesota State University Moorhead, Regional Science Center
- Woodland Prairies, LLC
- Prairie Restoration, Inc.

www.longspurprairie.org

Attachment 4a



RESTORE RESPECT INSPIRE



www.longspurprairie.org



WHAT WE DO

The Longspur Prairie Fund is dedicated to fostering the experiences, insights, and pleasures found in the native landscapes of the Red River Valley by way of advocacy, education, and conservation. We respect farmers, hunters, business owners, their properties, and their communities. We protect native plants, animals, habitats, and their ecologies. We teach the wisdom of the prairie through the arts and sciences. We restore native landscapes and preserve them for all time.

HOW WE DO IT

The Longspur Prairie Fund works with local partners to restore our wetlands and prairies and to preserve our natural heritage. We also sustain relationships with regional biologists, ecologists, and their students and thereby support scholarship and research on the wildlife, the agriculture, and the ecology of the High Plains. Longspur also develops and manages voluntary carbon waste strategies in partnership with our area's local businesses. It is our trash. Let's help clean it up.

GET IT DONE

Visit our restored landscapes!

- Site 1, in Ulen, MN, includes 160 acres of land that is open to hunters and visitors through the Minnesota Walk-In Access Program; it is part of a 1,300 acre habitat complex.
- Site 2, in Mahnomon, MN, has a work-in-progress restoration plan in place; when complete it will be part of a 4,000 acre wilderness.

Restored landscapes are good for your mind, your body, and your spirit. What are you waiting for? Take a walk on the wild side!



www.longspurprairie.org



ENGAGE

The Longspur Prairie Fund invites you to become part of a community vision for the the Red River Valley. If you are pro-business, pro-farmer, pro-hunter, pro-science, and pro-nature like us, then we want you to experience and discover the pleasures of our local natural legacy. Adopt, if you can. More importantly, spread the word and walk the land!



DECLARE YOUR SHARE

Visit our website.
Get involved.
Adopt.
Keep it real.

OUR PARTNERS

- The farmers, hunters, scholars, and business owners of the Red River Valley and surrounding counties.
- Biology and Environmental Studies Departments, Concordia College, Moorhead
- Energy and Environmental Research Center (UND)
- The Nature Conservancy of ND and MN
- Ducks Unlimited of ND and MN
- Minnesota Prairie Chicken Society

OUR ASSOCIATES

- The Audubon Society of ND and MN
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- Woodland Prairies, LLC
- Prairie Restoration, Inc.

www.longspurprairie.org



The Longspur Prairie Fund, hosted by the Impact Foundation, is a nonprofit, tax-exempt charity (TIN 20-0520386) organized under Section 501(c)(3) of the Internal Revenue Code. Donations are tax-deductible to the fullest extent allowed by law.



RESTORE RESPECT INSPIRE

ADOPT AN ACRE PROGRAM

www.longspurprairie.org

OUR MISSION

The Longspur Prairie Fund is dedicated to fostering the experiences, insights, and pleasures found in the native landscapes of the Red River Valley by way of advocacy, education, and conservation. We respect farmers, hunters, business owners, their properties, and their communities. We protect native plants, animals, habitats, and their ecologies. We teach the wisdom of the prairie through the arts and sciences. We restore native landscapes and preserve them for all time.

ADOPT AN ACRE

The Longspur Prairie Fund can't do its work without our local partners. Together, we're building a network of restored prairies and wetlands in the Red River Valley that serves local wildlife, local scientists, local hunters, and local communities.

How can you get involved?
Easy! Adopt an acre of local prairie or wetland.

The Longspur Prairie Fund offers five levels of annual prairie and wetland sponsorship:

Prairie Partner

\$240/year, adopt 1 acre

Prairie Steward

\$1200/year, adopt 5 acres

Prairie Warden

\$2400/year, adopt 10 acres

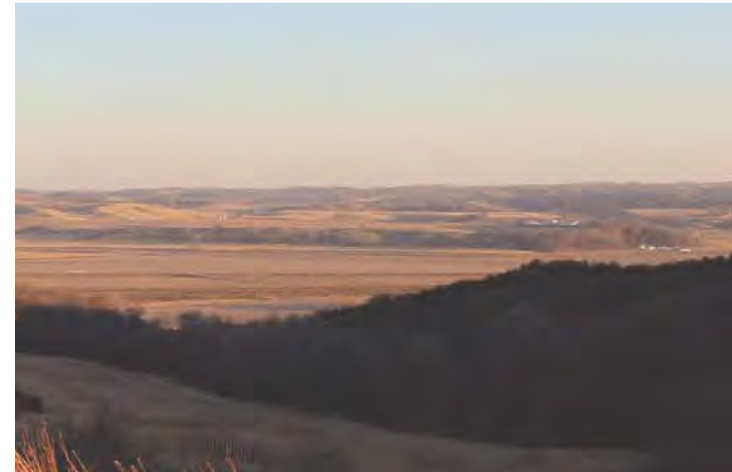
Prairie Sun

\$4800/year, adopt 20 acres

Prairie Star

\$9600/year, adopt 40 acres

Every acre of restored prairie can store more than a metric ton of carbon, can provide habitat for hundreds of different species of wildlife, and can sustain thousands of different species of grasses and flowers. Every acre of restored wetland can and purify about 1.5 million gallons of run-off, can recharge ground aquifers with water that has been filtered of 95% of its nitrates and phosphorus, and can provide habitat for over 25% of the High Plains' native plant and animal species.



www.longspurprairie.org





ADOPT AN ACRE

Our Mission

The Longspur Prairie Fund is dedicated to fostering the experiences, insights, and pleasures found in the native landscapes of the Red River Valley by way of advocacy, education, and conservation. We respect farmers, hunters, business owners, their properties, and their communities. We protect native plants, animals, habitats, and their ecologies. We teach the wisdom of the prairie through the arts and sciences. We restore native landscapes and preserve them for all time.

Get involved! Adopt an acre!

- \$240/year, adopt 1 acre, Prairie Partner
- \$1200/year, adopt 5 acres, Prairie Steward
- \$2400/year, adopt 10 acres, Prairie Warden
- \$4800/year, adopt 20 acres, Prairie Sun
- \$9600/year, adopt 40 acres, Prairie Star

Name: _____

Phone: _____

Email: _____

I want to help preserve the natural legacy of the Red River Valley. The Longspur Prairie Fund may invoice me for my selected annual adoption donation.

(Signature of Adopter)

(Date)

Name: _____

Address: _____

City, State, Zip: _____

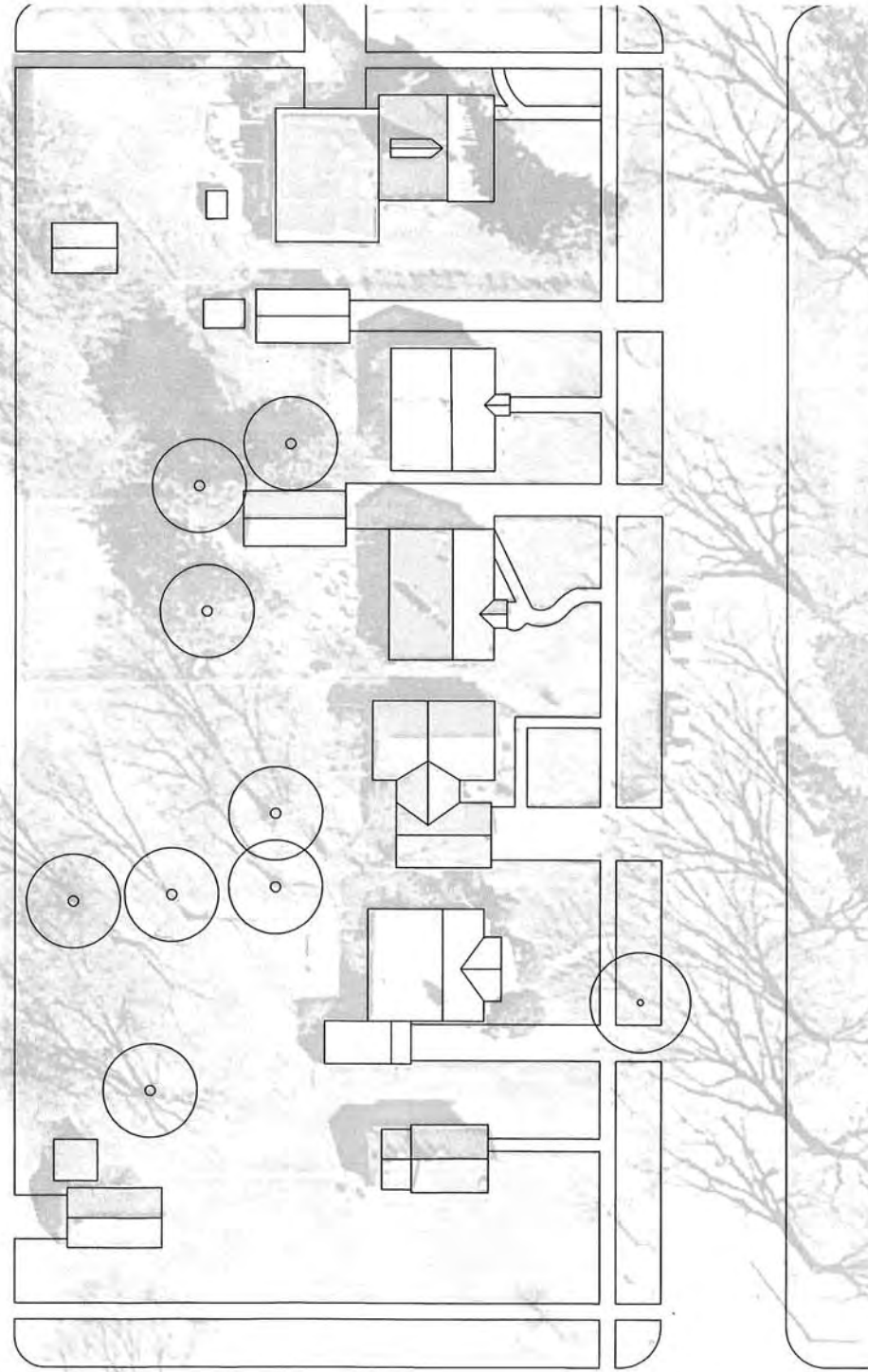
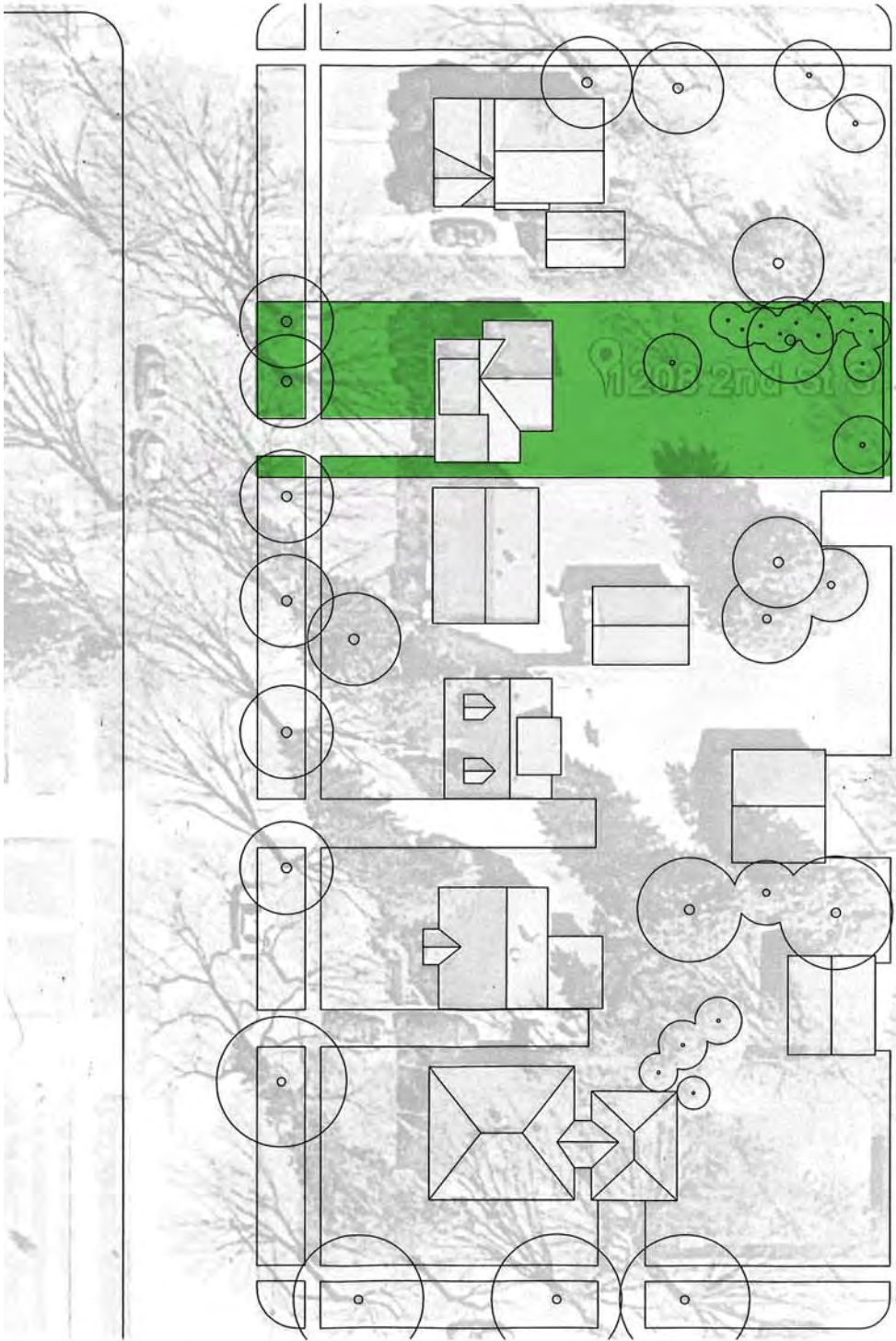
Peter Schultz
Director, Longspur Prairie Fund
c/o Impact Foundation
4141 28th Ave S
Fargo, ND 58104

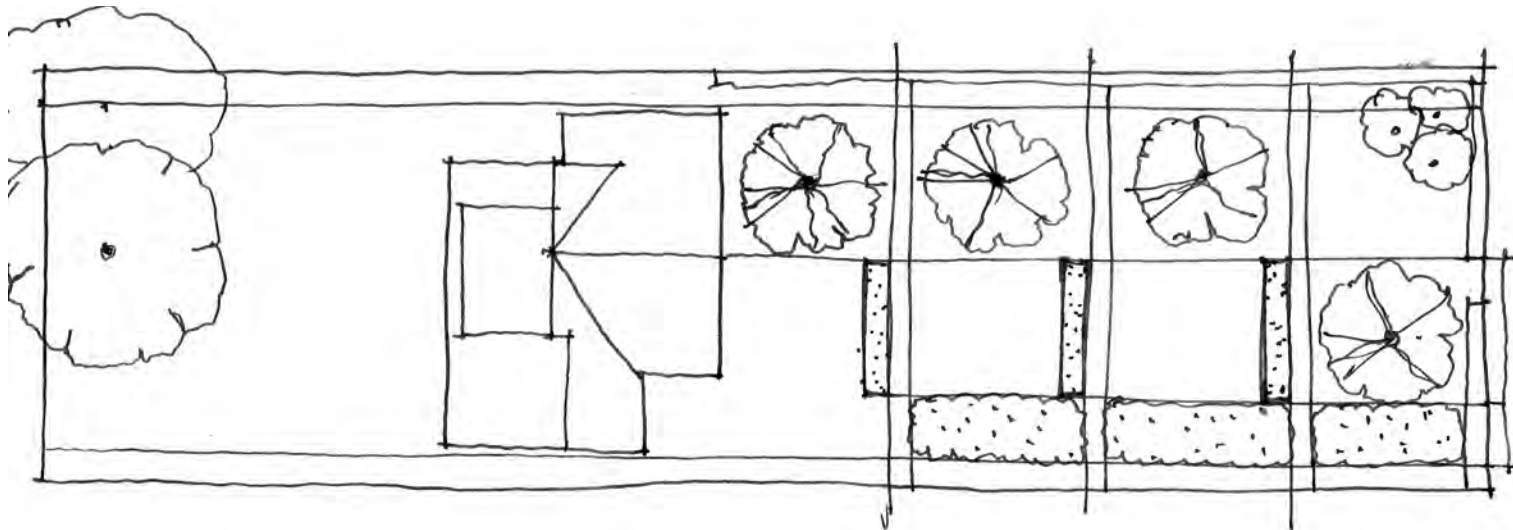
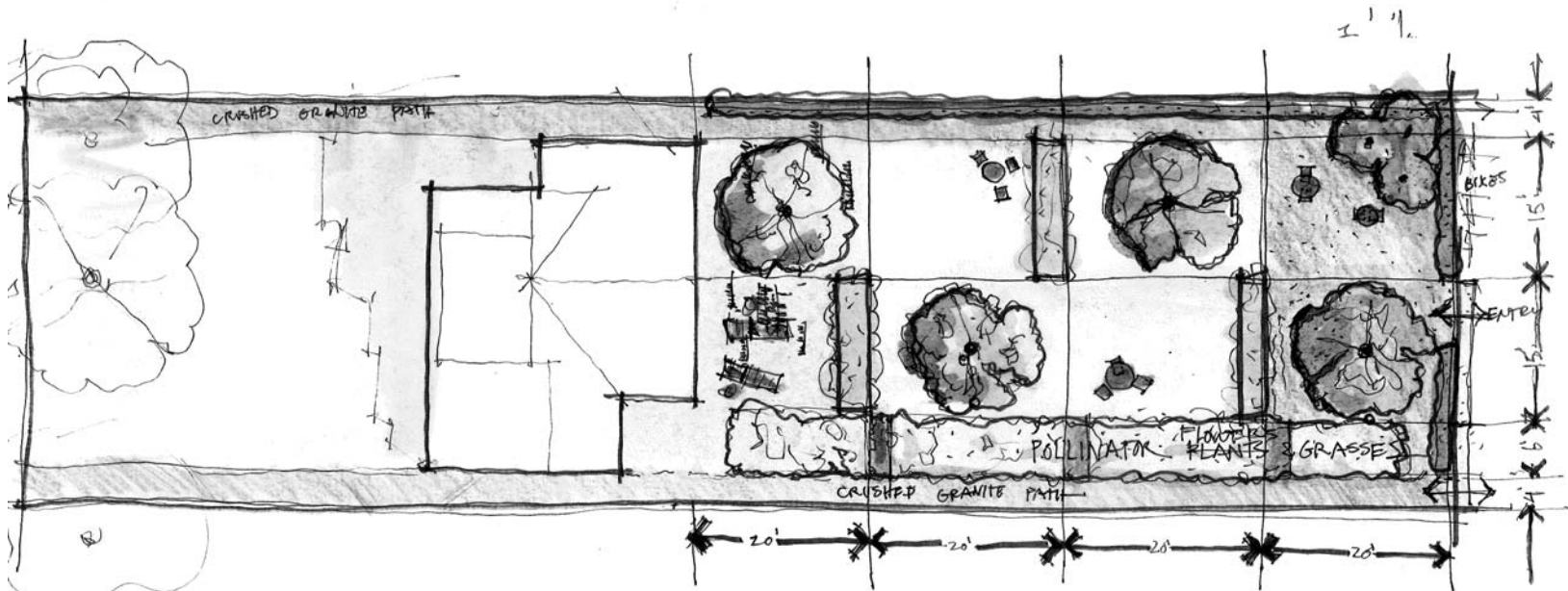
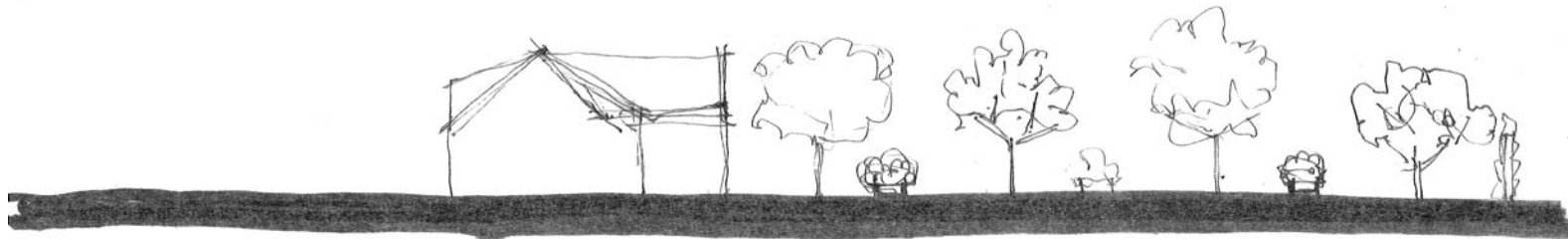


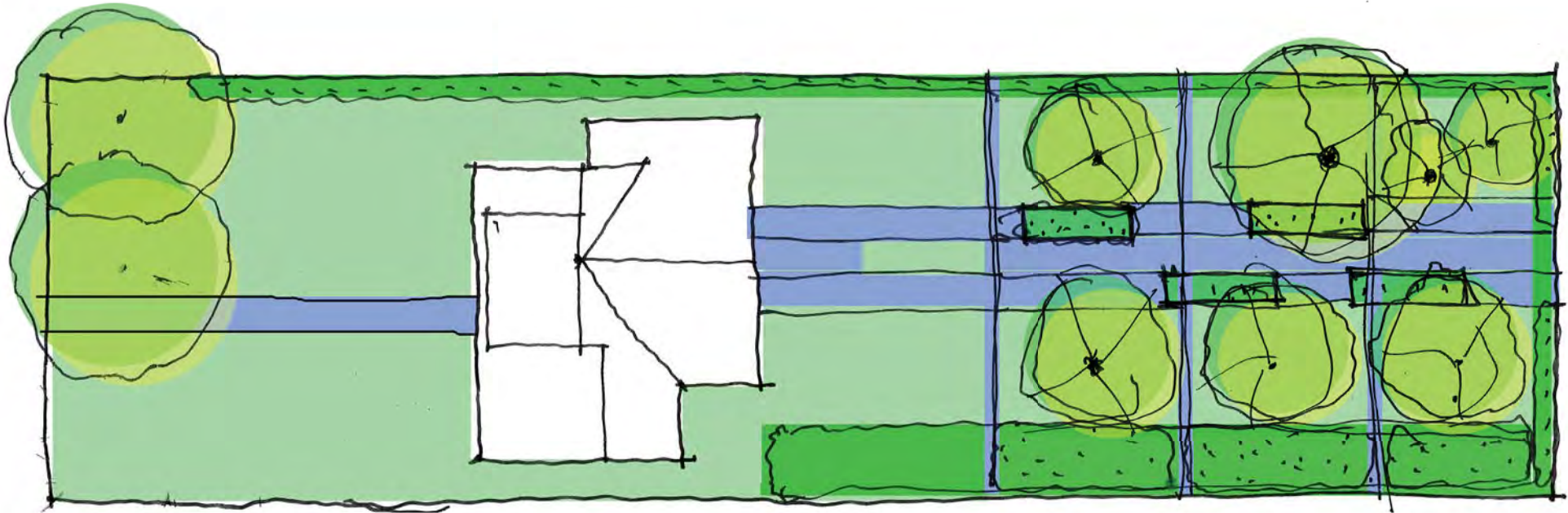
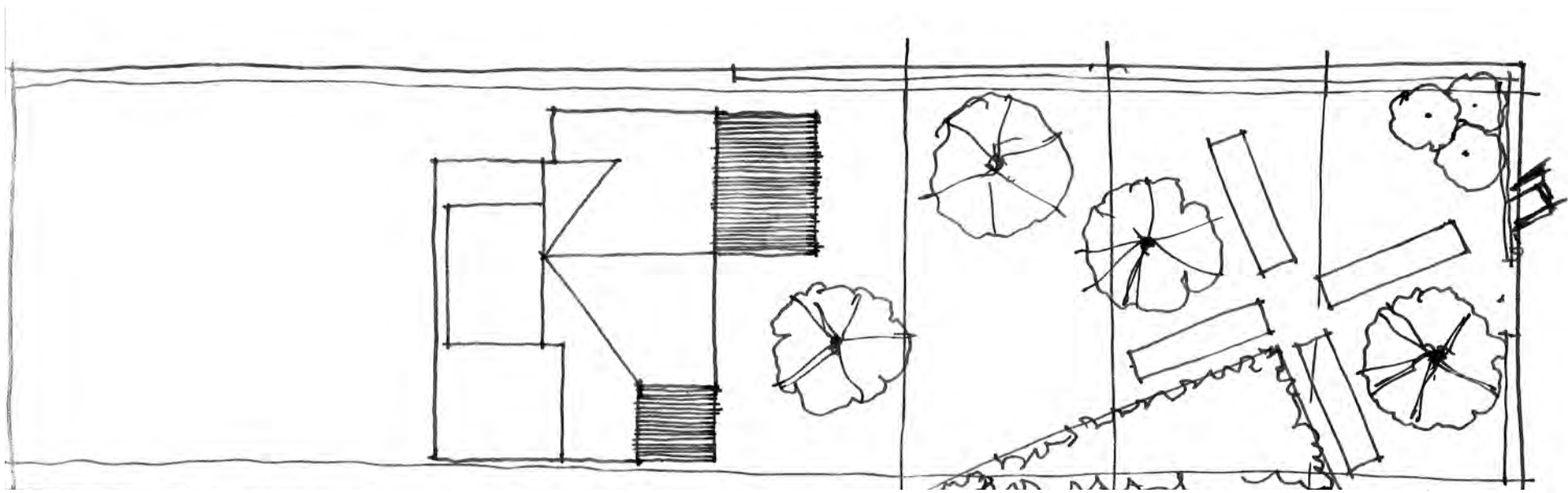
Place
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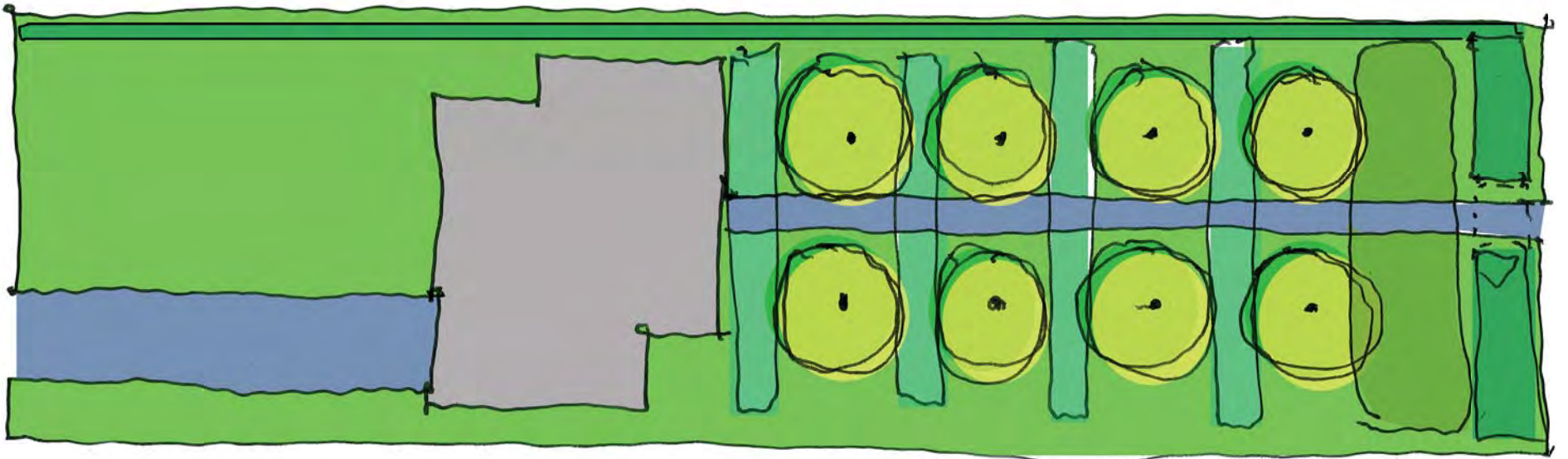
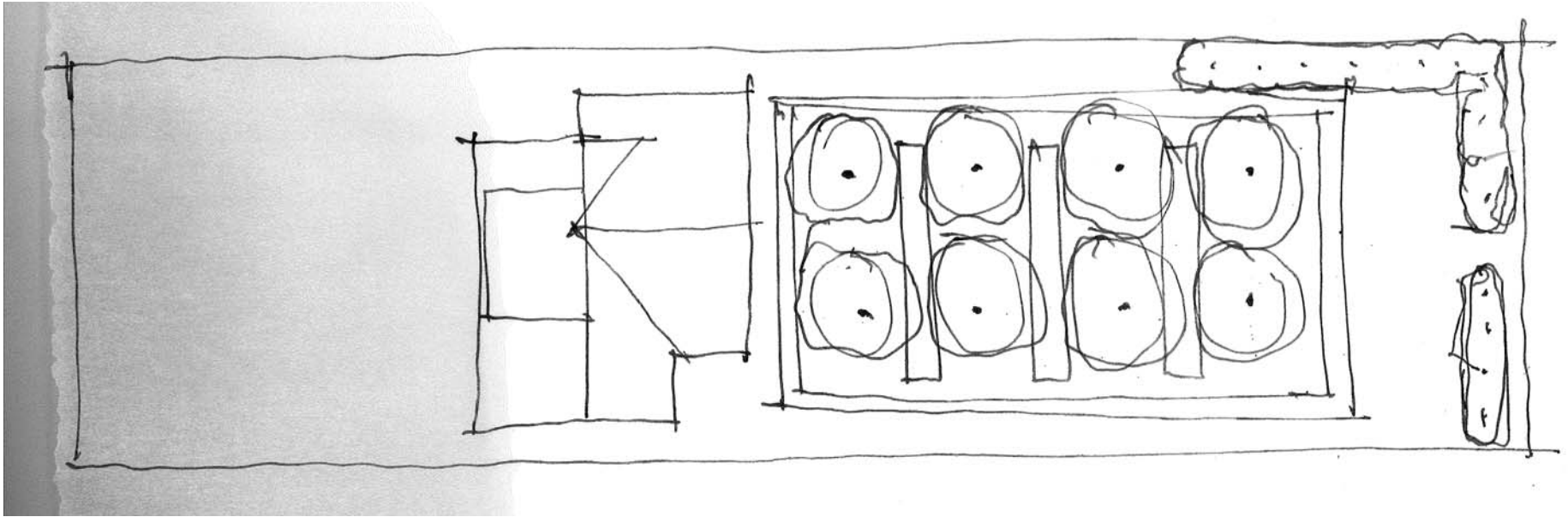
COMMUNITY GARDEN PROJECT
CONCEPT DRAWINGS

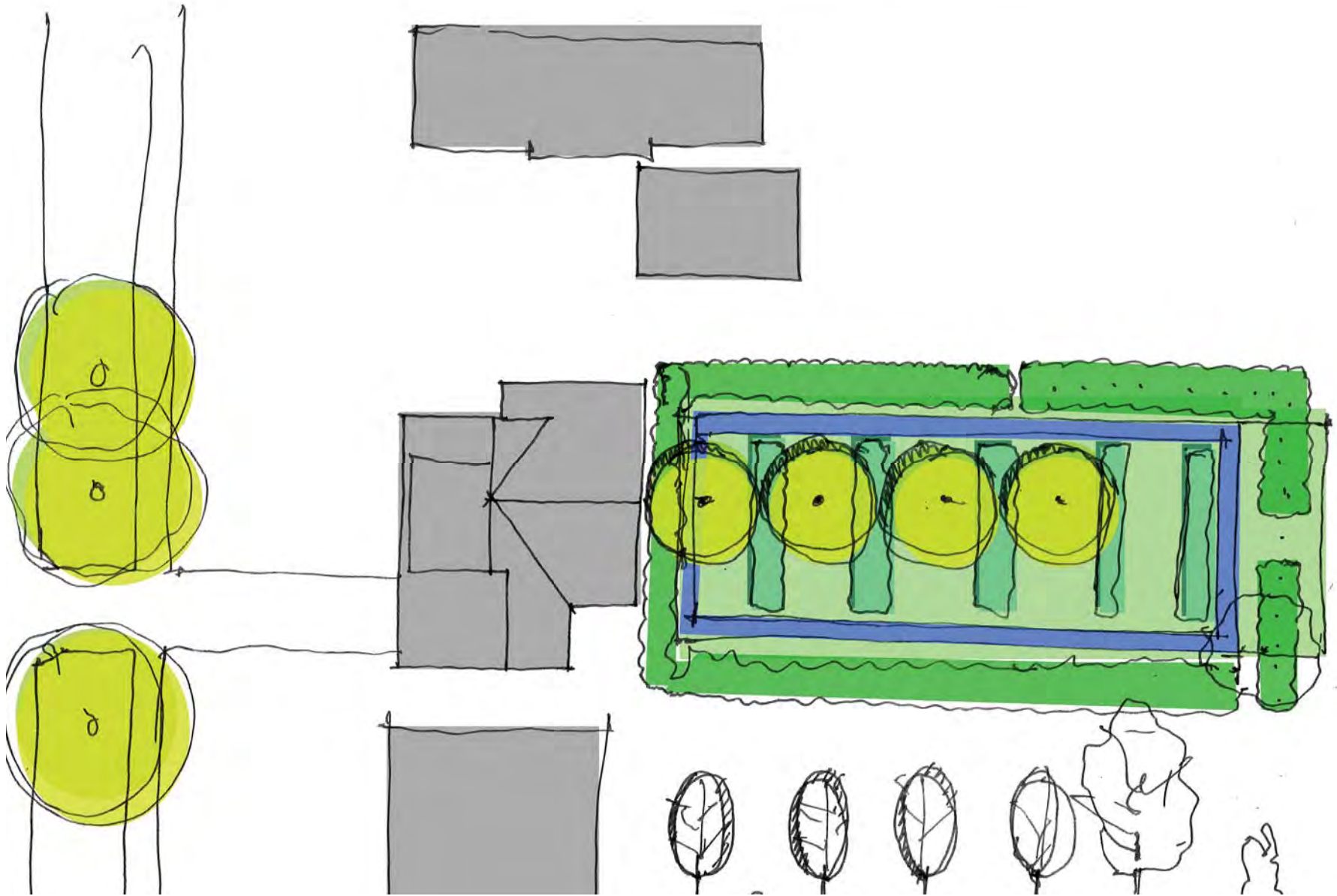
Drawings for Megan Myrdal and Peter Shultz
Troy Raisanen, Environmental Designer
May 9, 2016

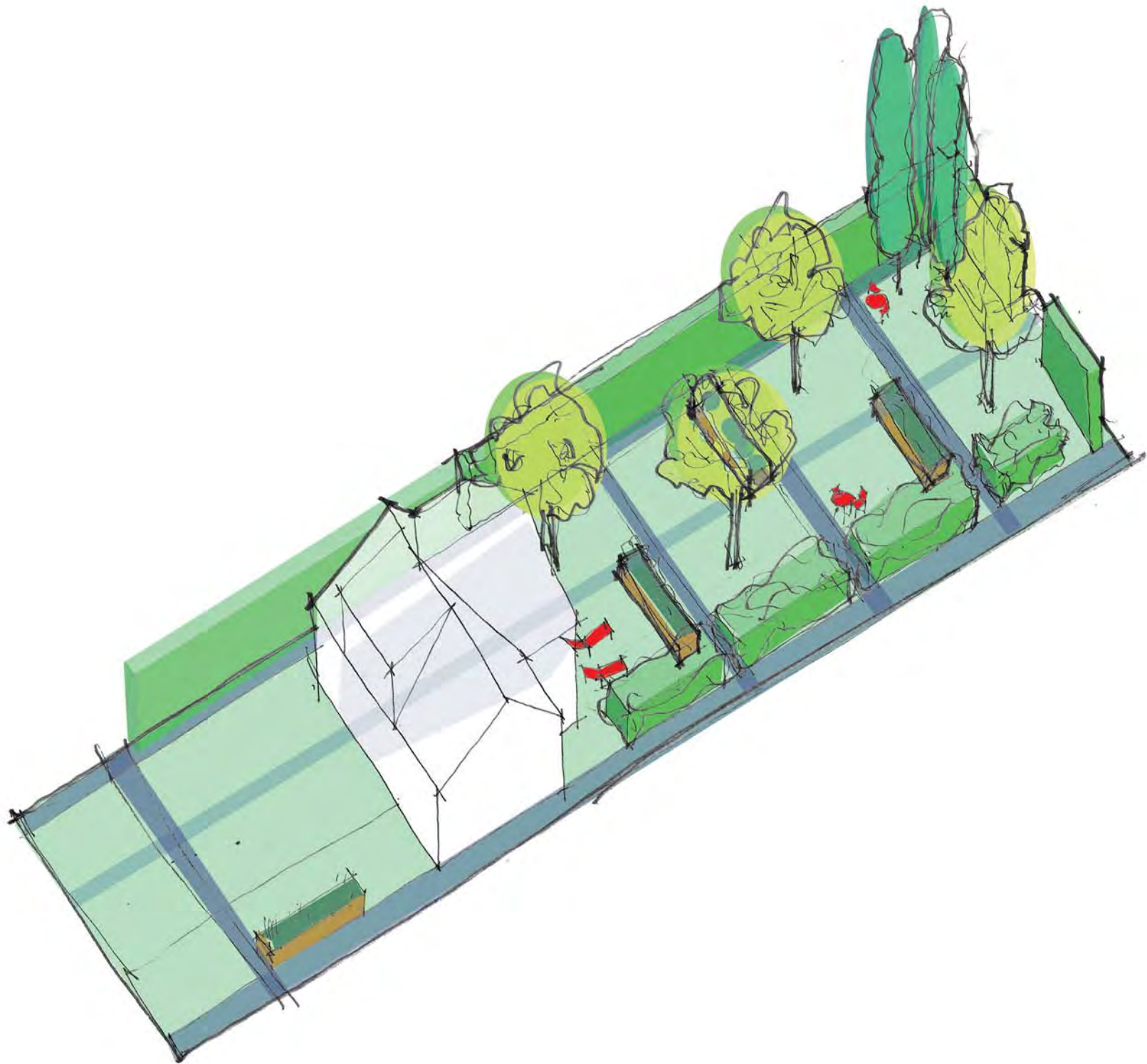








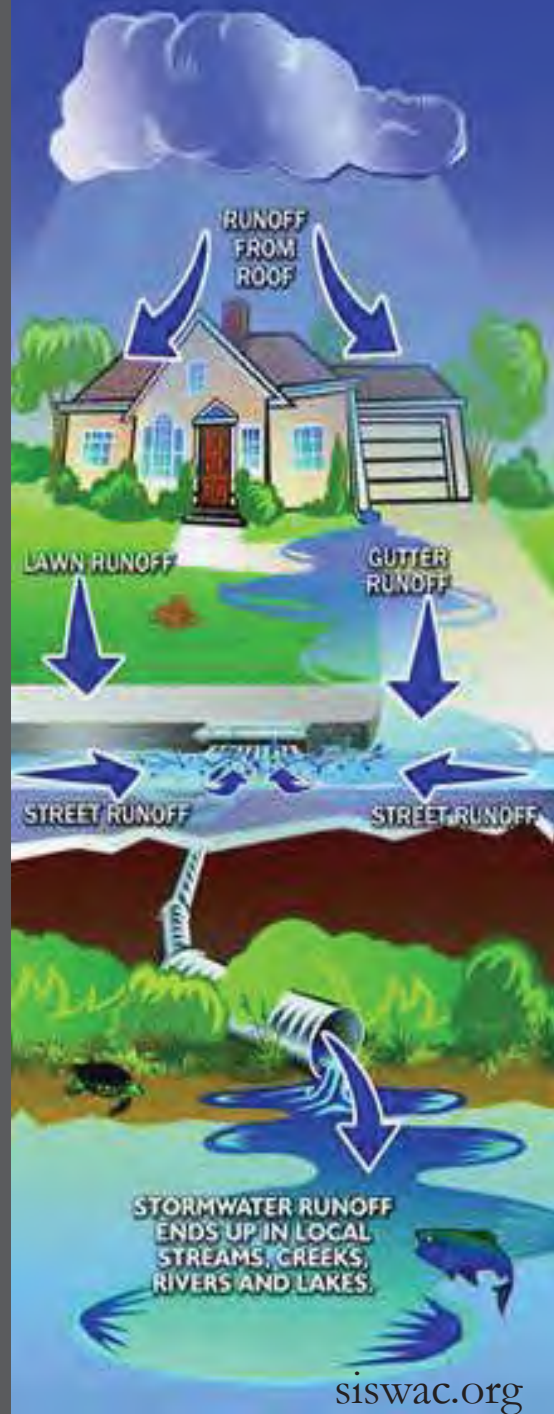






- * Rain Barrels
- * Compost Tumblers
- * Rain Gardens
- * Bale & Pallet Gardens
- * Green Roofs
- * Promoting BMPs
- * County Cost Share Opportunities

You are Connected to a River...



- Your rooftop is connected to your gutter
- Your gutter is connected to your downspout
- Your downspout is connected to your yard
- Your yard is connected to your driveway
- Your driveway is connected to your street
- Your street is connected to your storm drain/ditch
- Your storm drain is connected to a river

Rain Barrels

Rain water harvesting: "The accumulation of rainwater for re-use on-site rather than allowing it to runoff" (Wikipedia)

How much will my rain barrel collect?

- 1" rainfall + 1000 ft² roof = 600+ gallons of stormwater



Craig Stange

Rain Barrels

Advantages:

- Reduces stormwater runoff
- Reduces potable water consumption
- Applicable to residential, commercial and industrial sites
- Low-cost
- Easily maintainable
- Save – water, energy, money
- Happier & healthier plants

Disadvantages:

- May not be able to handle the water quality volume
- Regulatory and administrative obstacles may preclude the re-use of cistern water.



Angelique Kube

Capacity



Flat Back 55 gallons
Available at Fleet
Farm
\$199.00



54 gallons
Available online
\$115.00



45-50 gallons
Do-It-Yourself
\$50.00

Aesthetically Pleasing?



Gregg Thompson

What is Composting

- Composting is the natural breakdown of organic materials by microorganisms in the soil
- The end product, compost, is the rich organic matter full of nutrients and other benefits



Benefits of Compost

- Composting systems such as bins or piles help to speed up the natural decay process of wastes
- DIY compost pile or bin allows you to control what materials that go into your compost
 - Remember, whatever you put into your compost will go back into the soil

Benefits of Compost

- It is easy
 - Start with just leaves and grass
 - Work up to composting food scraps
- It saves money
 - Reduces or eliminates the need to buy chemical fertilizers
 - Reduces trash costs, saving taxpayer dollars (garbage handling is the one of the top expenses for many cities)



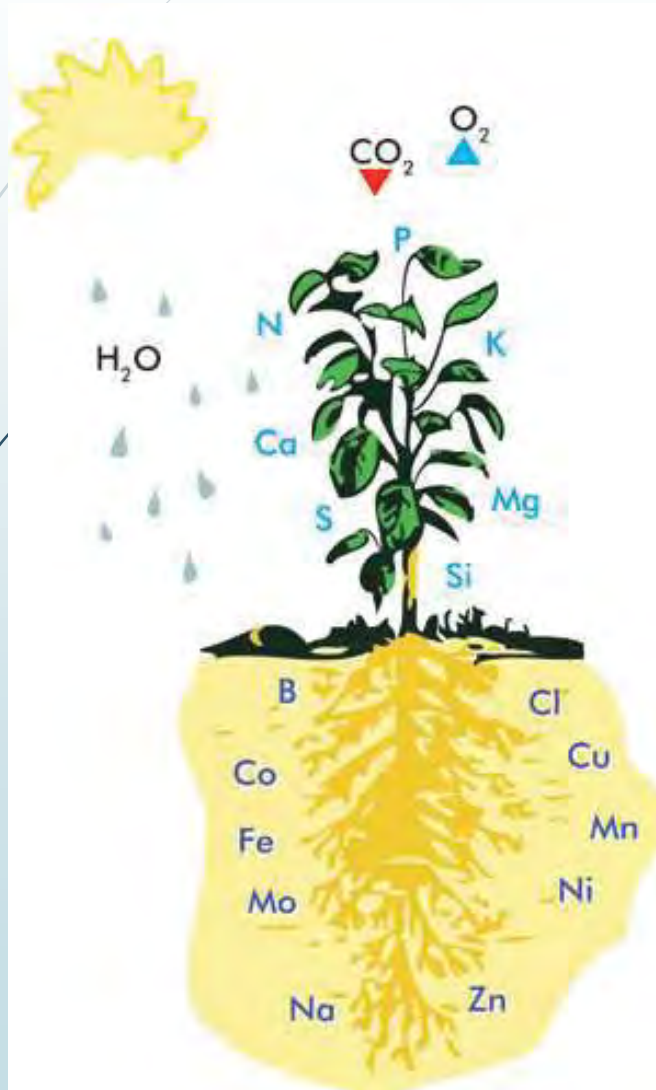
Benefits of Compost

- It's earth-friendly
 - Phosphorus free fertilizer
 - Keeps yard and kitchen waste out of landfills
- It promotes healthy soil
 - Improves soil structure and texture
 - Increases the soil's ability to hold nutrients, water and air
 - Increases organic matter in soil
 - Stimulates healthy root development in plants

Benefits of Compost

- There is only so much room for landfills
 - Limited space should be reserved for materials that can not be composted, recycled, or re-used
 - Landfills are the single largest direct human source of methane.

Benefits of Compost: Plant Nutrients



- Compost is NOT a fertilizer, but does contain many plant nutrients
- Phosphorus and Nitrogen are mostly in organic forms which are released slowly to plants
- Mature compost contains over 40 trace elements that are essential for plant growth

DIY Compost Bins



Make Your Own Rain Barrel Workshop



Help protect the Red River's water quality by making your own rain barrel. In addition to building your own rain barrel to take home, this workshop includes a short presentation to learn the basics of water quality and the effects of storm water runoff. Great for all ages and abilities.

When: April 25, 2017 A Moorhead Park 6-8 PM
May 10, 2017 A Fargo Park 6-8 PM
May 25, 2017 A West Fargo Park 6-8 PM

Fee: \$74.00 price includes supplies. Partial reimbursement available to Cass and Clay county residents upon completion of workshop.



Make Your Own Compost Tumbler Workshop

Learn the basics of composting and how to construct various composting systems. Then you'll be guided through a step-by-step process to construct your very own compost tumbler to use at home. Great for all ages and abilities.

When: May 2, 2017 A Moorhead Park 6-8 PM
May 17, 2017 A Fargo Park 6-8 PM
June 1, 2017 A West Fargo Park 6-8 PM

Fee: \$69.00 price includes supplies. Partial reimbursement available to Cass and Clay County residents upon completion of workshop.



Registration: Please register online through Moorhead Community Education <https://www.moorheadschoools.org/schools/alternative-schools/community-education/>

Workshops hosted by: Cass County Soil Conservation District, Clay County Soil and Water Conservation District, and River Keepers

Why Workshops

- Increase the knowledge and skills of community members.
- Give people hands-on experience: if they build it they are more likely to install and use it.
- Gives community members a higher sense of obligation regarding their impacts on water quality.
- They work!

What is Bio-retention?

The act of using plants to both hold and filter stormwater for conservation purposes.

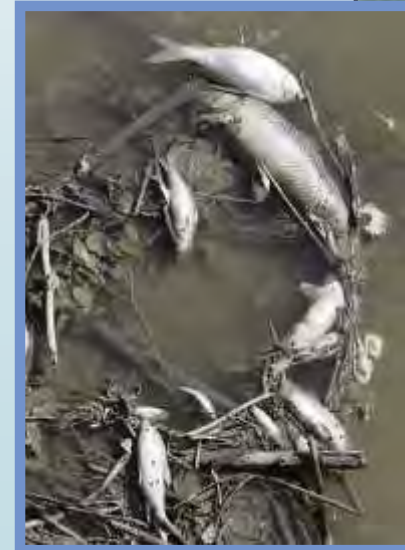
Benefits include:

- Increased amounts of water filtering into ground which recharges groundwater aquifers
- Reduces stormwater runoff pollutants which can contain oil, herbicides, pesticides, etc.
- Decreases volume of water entering storm drain system = better control over water quantity, reduced flooding
- Prevents erosion
- Increases wildlife habitats

Why Do We Need Bioretention Locally?

About 60% of current water pollution is attributed to storm water runoff and has been identified as one of the leading sources of pollution for all water bodies in the U.S.

- Drinking water – May be contaminated with higher nutrients.
- Recreation – May close waterways because of increase bacteria and trash.
- Aquatic life - Water that infiltrates the ground is usually much cooler than surface runoff, decreased dissolved oxygen.
- Erosion – Could dislodge sediment that might otherwise have remained in place.
- Groundwater - When runoff cannot seep into the ground, less water is available for use.
- Flooding – Greater peak storm flows occur, resulting in more severe and frequent floods.



What is a Rain Garden?

A rain garden is a shallow depression strategically located to capture, filter, and absorb storm water runoff with native perennials and grasses.

Installation of rain garden should be integrated into the current landscape.

- Formal
- "Natural" /Informal
- In-Between

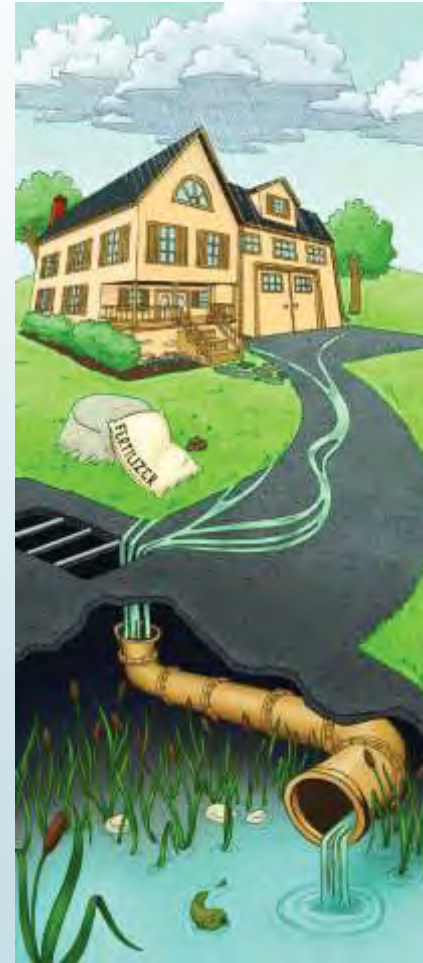
Shallow 4" -10" depression

Surface should be dry in 48 hours



Why Are Rain Gardens Important?

- Filter storm water runoff
- Reduce flooding potential
- Reduce potential soil erosion
- Recharge groundwater sources



Misconceptions

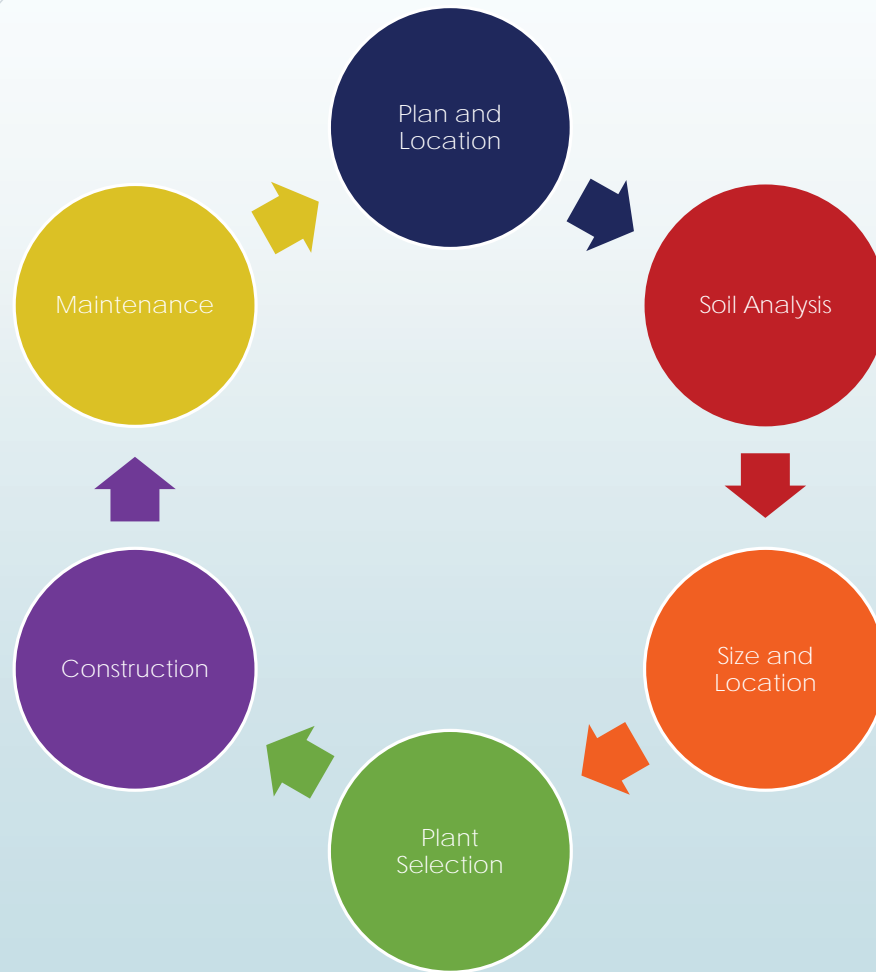
- Long term ponding
- Mosquito breeding
- Only water loving plants may be used
- Native plants are ugly
- There is no maintenance



Reality

- Designed to drain 24-48 hours max
- Hatching needs 7 days of water
- Dry most of the time, variety of plants used
- They can be very beautiful
- They require some watering until established and weed pulling

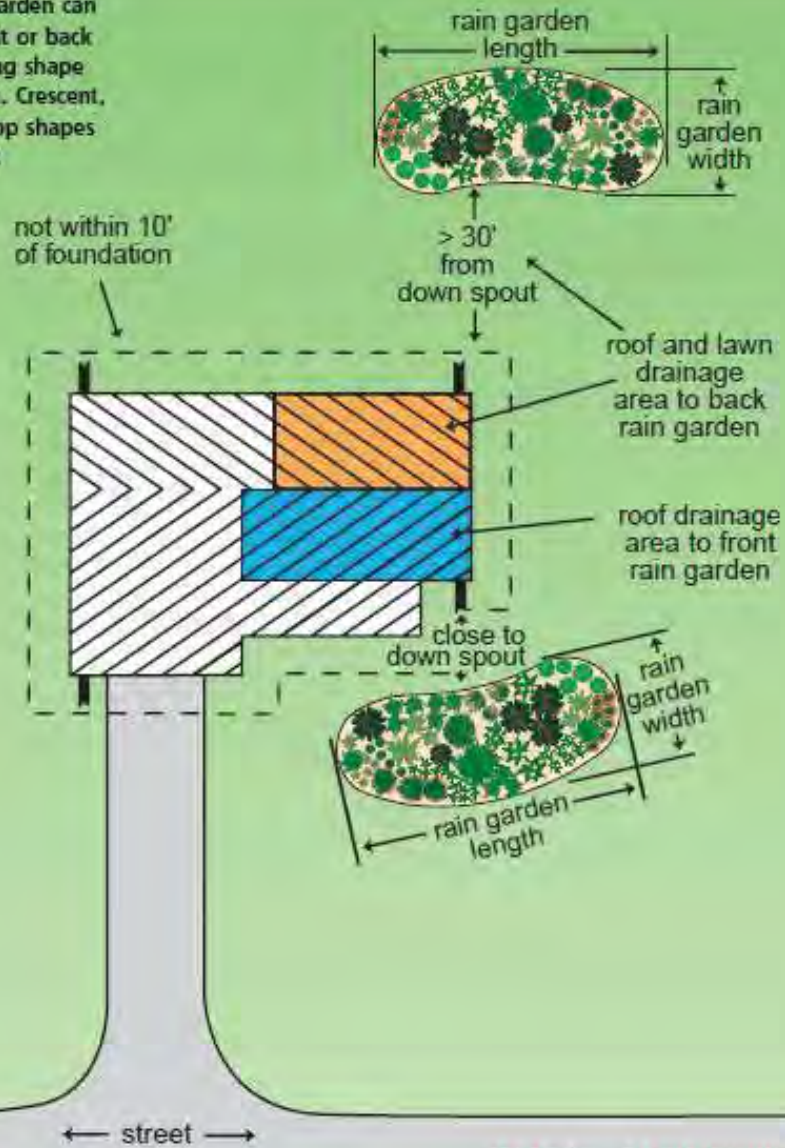
Principles of Rain Gardens



1. Develop a plan and location
2. Complete a soil analysis
3. Appropriate plant selection and arrangement
4. Determining size and location
5. Constructing the rain garden
6. Practice regular maintenance

Location of Rain Gardens

Figure 1 A rain garden can be built in the front or back yard. Pick a pleasing shape for the rain garden. Crescent, kidney, and teardrop shapes seem to work well.



Things to consider:

- Soil type
- Water source: Runoff
- Proximity to structure >10'
- Availability of sunlight

Complete Soil Analysis



Size of the Rain Garden

Depth:

Infiltration testing

- Dig 8" circumference x 8" deep hole
- Clean out loose soil & fill hole with water
 - Soak in for 1 hr. (doesn't need to empty)
- Refill to 1" below top, and mark that spot, start timing
- Measure infiltration in timed intervals (ex: 5, 15, 30 min)
 - Until empty or up to 2 hours which ever is first
- Calculate inches of infiltration/48 hours
- Answer represents depth of garden with max of 12"

Layout Size:

- Calculate impervious surface area (roof size 50'x20' = 1000 sq. ft. area)
- Divide impervious surface area by infiltration rate
- The result is the area of your rain garden
- Example
 - Impervious area: 50'x20' = 1000 sq. ft. area
 - Infiltration rate = 6 inches per 48 hrs.
 - $1000/6 = \sim 170$ sq. ft. area



Appropriate Plant Selection

Things to consider:

- Soil type
- Sunlight
- Ability to tolerate overflow
- Native species to the area

Other things to consider

- Colors of flowers
- Textures
- Bloom Periods
- Warm vs. cool season grasses
- Heights
- Budget
- Competition for growth:
 - Weeds
 - Small mammals
 - Plants' tendency to spread

Photo	Name <small>(Common & Scientific)</small>	Height	Flowers <small>(Bloom Time & Color)</small>	Light	Soil <small>(Moisture & Type)</small>
	Red Salvia <i>Salvia splendens</i>	24"-48"	20% to red	☀	60% - 80% L
	Black-Eyed Susan <i>Rudbeckia hirta</i>	12"-36"	yellow	☀	60% - 80% C.L.
	Blazing Star <i>Liatris scariosa</i>	12"-36"	purple to pink	☀	60% - 80% C.L.S.
	Butterfly Weed <i>Asclepias tuberosa</i>	12"-36"	orange	☀	60% - 80% L.S.
	Cardinal Flower <i>Lobelia cardinalis</i>	24"-48"	red	☀	60% - 80% C.L.
	Columbine <i>Aclypta canadensis</i>	18"-36"	red to yellow	☀	60% - 80% L
	Common Broomrape <i>Amorpha canescens</i>	36"-60"	white	☀	60% - 80% C.L.S.
	False Sunflower <i>Heliopsis helioscopia</i>	30"-60"	yellow	☀	60% - 80% L.S.
	Passiflora <i>Passiflora vitifolia</i>	12"-24"	green to white	☀	60% L
	Fragile Beardtongue <i>Aschmann dipata</i>	24"-60"	white to pink	☀	60% - 80% C.L.S.
	Green Blue Lobelia <i>Lobelia siphilitica</i>	12"-36"	blue white	☀	60% - 80% C.L.S.
	Jin-Fye Weed <i>Castilleja canadensis</i>	12"-36"	pink-purple	☀	60% - 80% C.L.
	Mistflower <i>Conoclinium coelestinum</i>	12"-42"	blue to violet	☀	60% - 80% C.L.
	New England Aster <i>Syrnoidium nitidum</i>	18"-72"	blue to white	☀	60% L
	Pink Tickseed <i>Coleostema spectabile</i>	18"-24"	pink	☀	60% L.S.
	Purple Coneflower <i>Echinacea purpurea</i>	24"-36"	purple to red	☀	60% - 80% C.L.S.
	Flowers <i>Asclepias tuberosa</i>	36"-72"	white and red	☀	60% - 80% C.L.
	Scotch Broomrape <i>Salpiglossis purpurascens</i>	12"-72"	yellow	☀	60% - 80% L.S.
	Black-eyed Susan <i>Rudbeckia hirta</i>	18"-60"	yellow	☀	60% C.L.S.

Bale Garden Supplies



- Straw bale
- Fertilizer
- Hand shovel
- Soil
- Plants
- Landscape fabric
- Stakes (tomatoes)



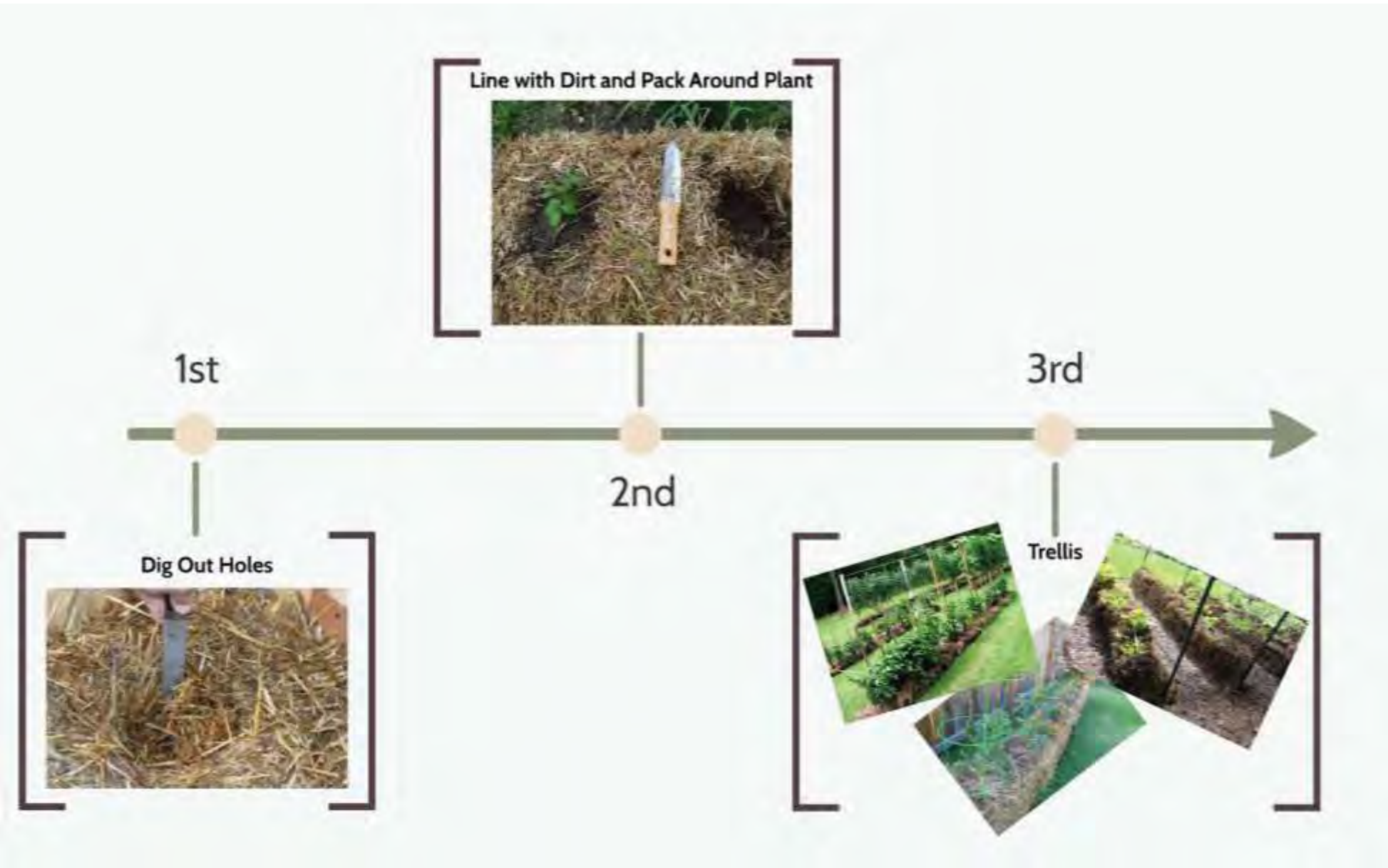


Suggested Species

- *Potatoes*
- *Tomatoes*
- *Cucumbers*
- *Squash*
- *Zucchini*
- *Annual Flowers*
- *Herbs*
- *Melons*
- *Lettuce*
- *Peppers*
- *Beans*
- *Peas*

Not Recommended

- *Top heavy species*
- *Corn*



Pallet Garden

Supplies

- Pallet- various sizes, heat treated only
- Landscaping fabric
- Staple gun & staples
- Soil
- Plant species



Pallet Garden Construction

- Cut a piece of landscaping fabric size of pallet (5 sides)
- Staple the fabric around all sides of the pallet leaving only the top open
- Dump soil into pallet
- Water down
- Add more soil
- Select Plants
- Plant



Vertical Gardening



Plant Selection:

- *Short growing species*
 - *Ex. Herbs & Radishes*
- *Vine Species*
 - *Ex. Strawberries*

Best Suited

- **Root Crops***
 - Radish
 - Onion
 - Rutabaga
 - Turnips
- **Bush Varieties**
 - Tomatoes (tiny tim, small fry, patio hybrid, toy boy)
 - Bell peppers
 - Eggplants
 - Spinach
 - Lettuce
 - Strawberries
 - Spinach
 - Celery
- **Vertical Growth-trellis**
 - Beans
 - Peas
 - Cucumbers
 - Squash
 - Green onion
- **Annual Flowers**



* Use caution with these, don't want them to grow so large you cant pull them out from between the boards

Kits for Sale!

Assembled Pallet Gardens.....\$30

Various sizes available includes a bag of soil

Pallet Garden Kit..... \$25

- 1- Pallet
- 1- Fabric backing
- 1- Installation Instructions
- 1- Bag of soil

Bale Garden Kit.....\$20

- 1- Straw bale
- 1- Bag of soil
- 1- Landscape fabric square
- 1- Installation instructions



Green Roofs

- Constructed of a lightweight soil media, underlain by a drainage layer, and a high quality impermeable membrane that protects the building structure.
- Planted with a specialized mix of native plants.
- Began in the urban areas of Germany over 30 years ago.



Green Roofs

Advantages:

- 3 inches of substrate can reduce annual runoff by more than 50 percent in temperate climates (Miller, 2000).
- Provides valuable urban open space
- Reduces city "heat island" effect
- Reduces summer air conditioning and winter heat demand
- Lengthens roof life 2 to 3 times
- Helps reduce volume and peak rates of storm water

Disadvantages:

- One of the most expensive LID alternatives
- Requires professional design expertise
- Requires specialized maintenance training



homedit.com

Promoting BMPs

Partnerships

- Homeowners
- Builders
- Developers
- City councils
- Planning commissions
- Architects
- City planners
- Landscape architects
- Biologists
- Hydrologists
- Ecologists
- Engineers
- Natural resource professionals



Incentives

- Public Education
- Cost share
- Rain barrels give aways
- Expedited review of permits
- Property tax reduction and other tax incentives
- Reduced application fees
- Public recognition
- Emphasize on city website, council meetings, etc.
- Free BMP advice
- Grants
- Rebates



Opportunities with Conservation Districts

The practice of conserving green areas and natural resources in an urban setting.

- PARTNERSHIPS!
- Water quality
 - Rain barrels
 - Rain gardens
- Riparian areas
 - Tree planting events
 - Bank restoration projects
- Erosion
 - Cover crops, even in gardens
 - Native plantings
- Pollinator habitat plantings
- Healthy living
 - Bale and pallet gardens
 - Fabric gardens

THANK YOU!!!!



Christine Holland
Executive Director
christine@riverkeepers.org
701.235.2895
www.riverkeepers.org
www.facebook.com/RiverKeepersFM



Ashley Fisk
Urban Conservationist
Ashley.Fisk@nd.nacdnet.net
701.282.2157 ext.3
www.casscd.org
www.facebook.com/CassCountySoilConservation



Mandy Lewis
District Coordinator
Amanda.lewis@i29.net
218.287.2255 ext. 101
www.claycounty.mn.gov/272/soil-water-conservation-district

Attachment 4c

Cost Share Programs Services for Urban Conservation & Low-Impact Development Projects

Natural Resource Conservation District – Urban Conservationist, Ashley Fisk

Our cost-share program is a 60:40 program meaning we cover 60% of project materials and the customer pays 40%

There is a maximum amount allowed at that 60% rate that varies per project type as outlined in the brochure but most practices have a \$500 maximum.

- With that said there can be waivers to that maximum amount for large projects or special circumstances pending board approval

Cost-share funds are not allowed to cover labor for the project, only materials!

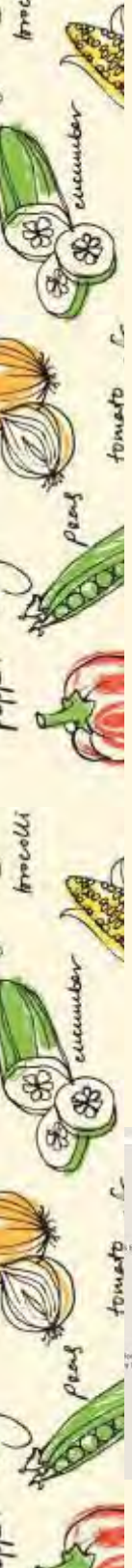
If more than one practice is wanting to be done, the cost-share is available for each and each practices has its own max. payable amount

- Ex. Someone wants to put in a raingarden and a xeriscape they would get cost-share for each with a maximum of \$500 for the rain garden plus a maximum of \$500 for the xeriscape in addition
- If putting in 2 rain gardens on one site location you cannot double dip for each one, the max would be \$500 for that practice of installing raingardens

Non-competitive at this point so really good odds of getting the funding!!

Easy application to fill out; includes basic contact information and information on the project you want to do

On a side note, please tell everyone this; when someone decides they want to do one of our urban practices, such as a rain garden, they get 100% free assistance from me. I do a site visit with them to determine the size and location of the project, I come up with a design and construction recommendations along with instructions to build it, I select plant species that will work best for their project, and I can arrange all materials that are needed for them. FREE OF CHARGE!



Equipment

Assembled pallet gardens come with a single pallet with landscaping fabric attached to the back. A bag of soil will come with it to be placed inside. Flowers and vegetables are not included.

Tools required for assembly of the pallet garden include: safety glasses, safety gloves, and staple gun or nail gun.

Orders must be placed via phone or email. Orders may be available for pick up within 5 days after the order is placed. You may pick up your order M-F 8:00-4:30pm.

We are located in the Capitol Square Office Park:
1665 43rd St. S Suit 103
Fargo, ND 58103



RAIN BARRELS, RAIN BARRELS, RAIN BARRELS!

Once you have created you pallet or bale garden how do you plan on watering it? Rain barrels are an excellant way! Why?

Rain barrel benefits include:
Conserving water and reducing your monthly water bill.

Provides healthier water for you delicate plants.

Reduces stormwater runoff which reduces stress and pollutants on our river.

How can you get one?
Cass County SCD along with River Keepers has them available to purchase! We also have rain barrel workshops where you can build one of your very own to take home!



To purchase a rain barrel or for more information on rain barrels and our workshops please contact Ashley:
ashley.fisk@nd.nacdnet.net
701.282.2157



Low Maintenance Alternative Gardens for Urban Settings



ashley.fisk@nd.nacdnet.net
701-282-2157 Ext. 3
www.cassscd.org
www.facebook.com/
CassCountySoilConservation



For Sale!

Assembled Pallet Gardens.....\$30
Various sizes available includes 2 bags of soil

Pallet Garden Kit.....\$25

- 1- Pallet
- 1-Fabric backing
- 1-Installation instructions
- 2-Bags of soil

Bale Garden Kit.....\$20

- 1-Straw bale
- 1-Bag soil
- 1-Landscape fabric square
- 1- Installation instructions

Learn How to Bale and Pallet Garden!

Free class held each spring contact Ashley Fisk for more details!



To purchase an assembled pallet garden, pallet garden kit, and/or bale garden kit, or for more information contact Ashley:
ashley.fisk@nd.nacdn.net
701.282.2157 Ext. 3

Bale Garden Benefits:

Space- Minimal space is needed

Maintenance- Looking for a WEED FREE garden? The best part of these micro-garden options is the fact they are virtually weed free!

Accessibility - No need for kneeling or constantly bending over.

Watering- When needed. If a soaker hose is used along with a timer there is NO WATERING required.

Harvesting- SIMPLE! For bigger root veggies such as potatoes simply lift up the bale and grab the potatoes that are hanging out of the bottom.

Aftermath: Towards the end of the season the bales will begin to break-down completely. The benefit here being straw from the bale is an excellent composting material. Use the residue to mix in as compost in other gardens or soils around the yard.



Pallet Garden Benefits:

Space- Minimal space is used especially for vertical plantings.

Maintenance- Low maintenance is needed for these. If planting veggies from seed there is slight potential for weeds to grow, however, there is little area that needs weeding and once plants grow to cover the soil area there should not be any weeds. If planting annual flowers from packs there is a great chance of having a weed free garden from the beginning.

Planting- SIMPLE! The pallet makes for perfect rows and allows for easy plant identification.

Aftermath- Relatively easy cleanup and the pallets may be reused for next year!

What is Compost?

Compost is decomposed organic material, such as leaves, grass clippings, and kitchen waste. It provides many essential nutrients for plant growth and therefore is often used as fertilizer. Compost also improves soil structure so that soil can easily hold the correct amount of moisture, nutrients and air. Compost improves the texture of both clay soils and sandy soils, making either type rich, moisture-retentive, and loamy.

Benefits:

- Reduction in garbage volume.
- A rich, natural fertilizer cuts back on use of chemical fertilizers.
- Improves soil aeration and drainage.
- Helps control weeds.
- Decreases the need for costly watering
- and many more!



Composting Tips

As soon as decomposition begins, the volume of the pile will decrease. Don't be tempted to add more materials at this point, as this resets the clock on that batch.

You will maximize your composting efforts if you aerate by turning or mixing the heap about once a week. A garden or hay fork works well.

Finished compost is usually less than half the volume of the materials you started with, but it's much denser. When finished it should look, feel and smell like rich, dark soil. You should not be able to recognize any of the items you originally placed in the pile.

Common problems:

- If the compost is too wet, turn it more frequently or add dry brown material.
- If the pile doesn't heat up, add more green material to the compost, may need to add water, may need to aerate.
- If there is an ammonia or rotten egg smell, turn the compost or add brown material to dry it out.
- If large amounts of dropped apples or kitchen scraps attract wasps or other unwelcome pests, turn more frequently.

Using finished compost:

- Mix compost into the soil to improve it.
- Spread compost on lawn to fill in low spots.
- Use as mulch for landscaping and gardening.
- Mix compost into pots of potted plants.

Composting: Basic Information And Make Your Own Tumbler Workshop



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www.casscd.org
[www.facebook.com/
CassCountySoilConservation](https://www.facebook.com/CassCountySoilConservation)

Make Your Own Compost Tumbler Workshop



Save water, money, time and maintenance costs by using yard waste to benefit you and your soil. This workshop will cover the basics of composting and provide instruction to construct various composting

systems. By tumbling this composter around the yard once or twice a week you could have a barrel full of compost in as little as two weeks! This workshop is taught by River Keepers and Cass County Soil Conservation District.

When: To be announced. Check our facebook page for updates,

Fee: \$69.00 includes supplies.

Cass County residents may be eligible for partial reimbursement of fee; information will be available at the conclusion of the workshop.

Come prepared to carry home an empty 55-gallon drum.

To register: contact Moorhead Community Education at www.moorheadschoools.org/Schools/Alternative-Schools/Community-Education/ or by calling 218.284.3400.

Styles of Composters

Closed style: Enclosed containers for composting include upright box-like containers and rotating drums or tumblers that completely enclose the compost pile.

Advantages:

- Will rarely attract pests.
- Rotating drums are the easiest type of composter to mix or turn.
- Usually easy to unload.

Disadvantages:

- Require water to be added since they don't let in rain.
- Upright containers (not rotating drums) may be very difficult to mix or turn.

Open style:

Open bins are very simple and loosely encase the compost pile. They usually do not have a lid. They can be constructed with wood, chicken wire, or recycled plastic.

Advantages:

- Easily collect rain water to speed the composting process.
- Very convenient for adding materials to the compost pile.

Disadvantages:

- Can attract rodents, flies, bees, and bears.
- They can let in TOO much moisture for efficient composting, and they may be more difficult to mix.



Example of open container

Big Stock Photo

What Can Be Composted?

Key materials are nitrogen-rich 'greens' and carbon-rich 'browns', water, and air.

Examples of greens are green leaves, coffee grounds/filters, tea bags, plant trimming, fruit (including dropped apples) and vegetable scraps, egg shells and fresh grass clippings.

Examples of browns are dead plants, sawdust from untreated lumber, twigs, and dried grasses, weeds, straw and leaves.

Water allows microbes in your compost to grow and help decompose material. The compost should be moist. Air adds in decomposition and controls odors.

A recipe is 1 part green to 4 part brown.

What not to compost:

- **Meat, fish, and animal fats** – These materials may attract unwanted visitors to your compost pile.
- **Shredded newspapers or office paper** – The paper may contain chemicals that are not good for your compost. Recycle them instead.
- **Ashes from your grill** – Wood ashes can be very useful in small quantities, but BBQ grill ashes should NEVER go into your compost pile.
- **Dog and cat feces** – These materials can add diseases to your compost, and they have an unpleasant odor. Use chicken, horse, cow, and rabbit manure instead.
- **Sawdust from treated lumber** – Sometimes lumber is treated with harmful chemicals.

Why are pollinators and pollination important?

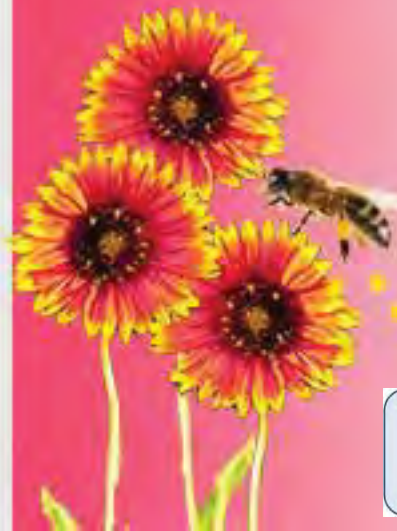
Pollinators are Keystone Species, meaning they are species which others depend on. Almost 90% of flowering plants rely on pollinators for fertilization. And 1 out of every 3rd bite of food was produced with the help of a pollinator. The pollination they do on a daily basis allows for things such as fruit, cotton, chocolate, coffee, vegetables, and nuts to be produced. Can you imagine what life would be like without that morning cup of java or cotton clothing!



How can you get a pollinator habitat of your own?

Cass County Soil Conservation District can help with the design of a pollinator habitat. Cass county residents may be eligible for partial reimbursement with the installation of a pollinator habitat.

To request a meeting or to get more information contact:
Ashley Fisk
701.282.2157 ext 121
ashley.fisk@nd.nacdnet.net
or visit our website www.CassCd.org and follow the link under urban conservation.



Pollinator Habitats

What is a pollinator habitat?

A pollinator habitat is an area designated to provide adequate food, water, and a safe living space for our native pollinators. This habitat has eliminated the use of pesticides to prevent accidental contact with pollinators. The habitat has also been strategically designed with a diversity of plants which allows for a variety of pollinator species to feed on the nectar at all times of the season.



ashley.fisk@nd.nacdnet.net
701.282.2157 ext. 3
www.CassCd.org
www.facebook.com/CassCountySoilConservation



What should I plant?

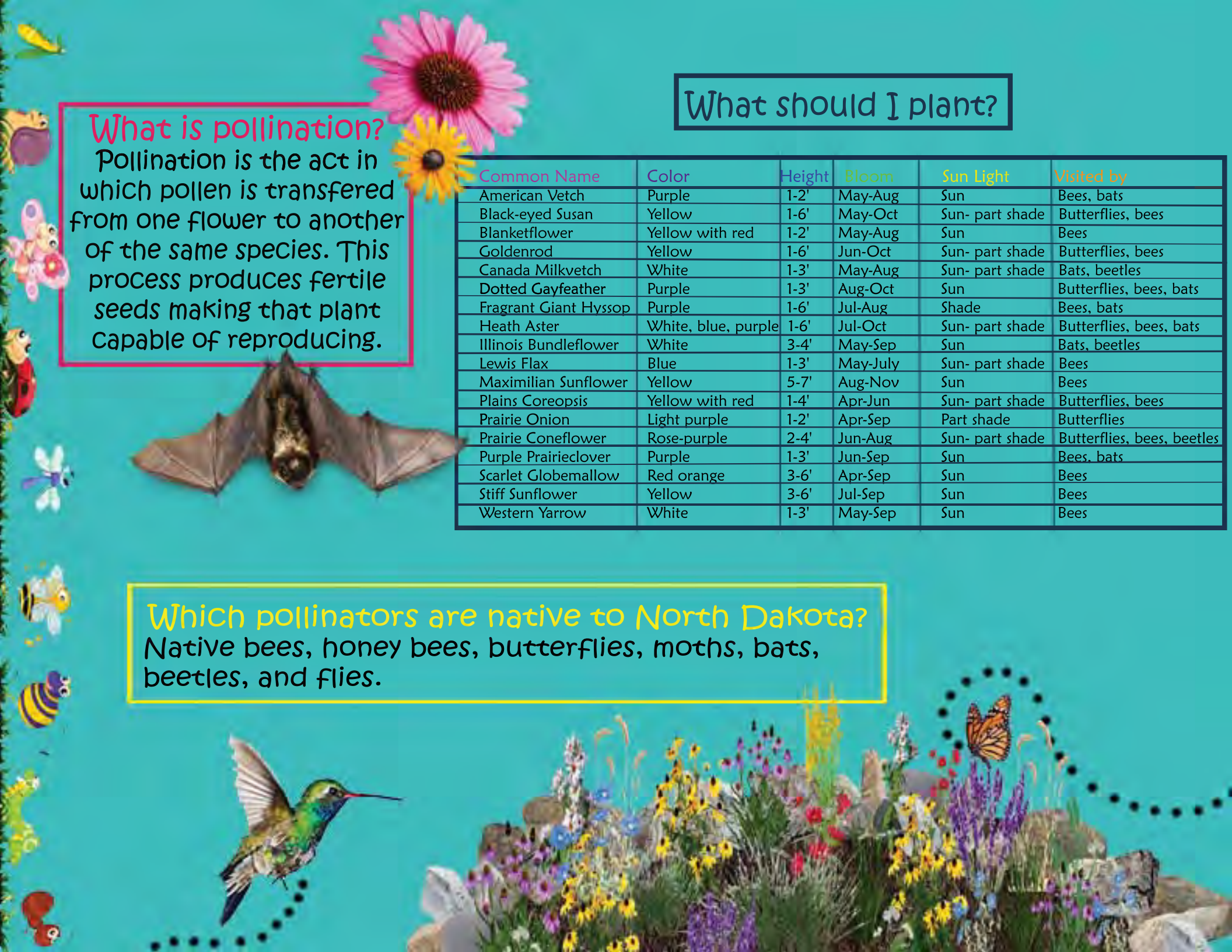
What is pollination?

Pollination is the act in which pollen is transferred from one flower to another of the same species. This process produces fertile seeds making that plant capable of reproducing.

Common Name	Color	Height	Bloom	Sun Light	Visited by
American Vetch	Purple	1-2'	May-Aug	Sun	Bees, bats
Black-eyed Susan	Yellow	1-6'	May-Oct	Sun- part shade	Butterflies, bees
Blanketflower	Yellow with red	1-2'	May-Aug	Sun	Bees
Goldenrod	Yellow	1-6'	Jun-Oct	Sun- part shade	Butterflies, bees
Canada Milkvetch	White	1-3'	May-Aug	Sun- part shade	Bats, beetles
Dotted Gayfeather	Purple	1-3'	Aug-Oct	Sun	Butterflies, bees, bats
Fragrant Giant Hyssop	Purple	1-6'	Jul-Aug	Shade	Bees, bats
Heath Aster	White, blue, purple	1-6'	Jul-Oct	Sun- part shade	Butterflies, bees, bats
Illinois Bundleflower	White	3-4'	May-Sep	Sun	Bats, beetles
Lewis Flax	Blue	1-3'	May-July	Sun- part shade	Bees
Maximilian Sunflower	Yellow	5-7'	Aug-Nov	Sun	Bees
Plains Coreopsis	Yellow with red	1-4'	Apr-Jun	Sun- part shade	Butterflies, bees
Prairie Onion	Light purple	1-2'	Apr-Sep	Part shade	Butterflies
Prairie Coneflower	Rose-purple	2-4'	Jun-Aug	Sun- part shade	Butterflies, bees, beetles
Purple Prairieclover	Purple	1-3'	Jun-Sep	Sun	Bees, bats
Scarlet Globemallow	Red orange	3-6'	Apr-Sep	Sun	Bees
Stiff Sunflower	Yellow	3-6'	Jul-Sep	Sun	Bees
Western Yarrow	White	1-3'	May-Sep	Sun	Bees

Which pollinators are native to North Dakota?

Native bees, honey bees, butterflies, moths, bats, beetles, and flies.



Rain Barrel Facts

Historical Use: Until the 1940s, the rain barrel was a common sight at farms and homes throughout rural America. Rainwater often was softer than well-supplied water, and wooden barrels placed under the roof edge of a barn could catch hundreds of gallons of water during a brief shower. But with modern plumbing, the rain barrel became unnecessary. Until now.

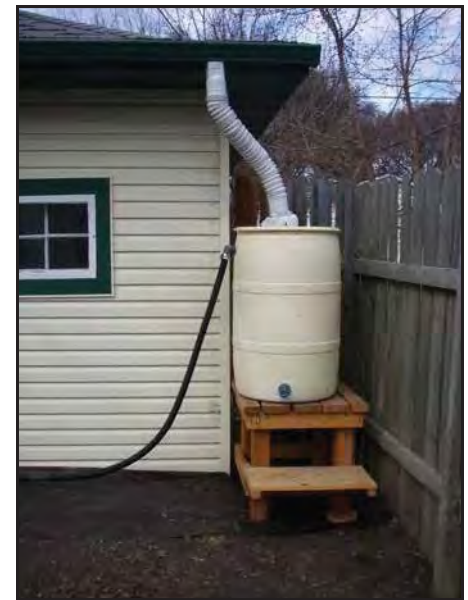
How much water will come off my roof? Will my barrel get full? One inch of rainfall on a 1000 (10' x 10') square foot roof provides over 600 gallons of stormwater.

Using the above data, let's assume a roof has a single peak that runs the entire length of the roof and there are no other peaks or valleys. That means there is 500 square feet on a side which will result in 300 gallons of water per side in that one inch rainfall. Two downspouts that are evenly spaced on each side of a house we would have 150 gallons of water coming down each of the four downspouts. Our barrels hold about 50 gallons, assuming it is empty. So you will either need 3 barrels, per downspout, all connected together to hold that runoff or if you have fewer barrels make sure your overflow pipe is installed.

Rain Barrel Benefits

- ◆ **Save** - Conserve water, reduce demand for treated tap water, and save money by lowering your monthly bill. A rain barrel can save over 1,000 gallons of water during peak summer months.
- ◆ **Happier plants** - Rainwater is free of the additives (e.g., chlorine and fluoride) in tap water that plants don't need or want. Rainwater is also slightly acidic, helping plants access soil nutrients. And if your city restricts watering during times of dry weather, it may be the only way to avoid having your garden wilt. The water stored in a rain barrel can be used to water lawns and gardens either with a traditional hose, soaker hose or with a watering can.
- ◆ **Building protection** - Control moisture levels around the foundation of buildings.
- ◆ **Flexibility** - As water storage needs change, the number of barrels in a system can follow suit.
- ◆ **Reduced stormwater runoff** - Rain barrels can divert a limited amount of stormwater from roofs, reducing strains on urban streams and storm sewer systems. Water and pollutants that go down a storm drain in the street go directly to the Red River, not to a waste water treatment facility. If stored water will not be used for plants or a lawn, slowly release stored water by allowing it to drain through the lower opening. Attach a hose to direct the water where you want it to flow. Make sure your barrel is empty or lowered enough to capture the maximum amount of water expected with each rain event.

RAIN BARRELS: Basic Information, For Sale, and Make Your Own



Angelique Kube



jessica@riverkeepers.org
701.235.2895
www.riverkeepers.org
www.facebook.com/RiverKeepersFM



Ashley.Fisk@nd.nacdn.net
701.282.2157 ext.3
www.casscd.org
www.facebook.com/
CassCountySoilConservation

For Sale

Assembled Rain Barrels

ON SALE (regular \$85).....\$50
55 gallon used food grade barrel
Available in blue or white

Hardware Kit.....\$35

1- Flexi-Fit Diverter
1- 3 piece Hole Saw Set
1- Sprigot and threaded Rubber Seal
1- Fill Hose and Rubber Seal
1- "Do Not Drink This Water" Sticker
1- Installation Screws
1- Installation instructions

Barrel.....\$35

1-55 gallon used food grade barrel
Blue or White

To buy an assembled rain barrel,
hardware kit and/or barrel, or for more
information contact Jessica:
jessica@riverkeepers.org or
701.235.2895



Equipment

Assembled rain barrels come equipped with a threaded spout, overflow hose, and the grate with thin mesh for debris collection. The only part not included in the price is the downspout extension which can be found at any local home store for around \$10.

Tools required for assembly of the Rain Barrel Kit include safety glasses, safety gloves, drill, tape measure, pencil, scissors, Phillips screwdriver and a level.

Orders must be placed by e-mailing or calling River Keepers. Orders will usually be ready for pick up 3 days after the order is placed. Usually the order must be picked up during normal working hours 8-5 but if necessary other arrangements can be made.

Maintenance:

Don't use the barrel in the winter to avoid ice damage. Drain the barrel, remove the inlet hose and leave all faucets open before freezing weather.

Make Your Own Rain Barrel Workshop

Save money on your water bill and help protect the Red River's water quality by making your own rain barrel! This workshop is taught by River Keepers and Cass County Soil Conservation District.

When: To be announced. Check out our events listed on Facebook and www.casscd.org for updates.

Fee: \$74.00 includes supplies.



Cass County residents may be eligible for partial reimbursement of fee; information will be available at the conclusion of the workshop.

Come prepared to carry home an empty 55-gallon drum.

To register: contact Moorhead Community Education at www.moorheadschoools.org/Schools/Alternative-Schools/Community-Education/ or by calling 218.284.3400.

What is a Rain Garden?

A rain garden is a shallow depression made into a low-maintenance garden which uses native plants to absorb rain water runoff from impervious surfaces (driveways, roofs, and sidewalks etc.) as its main water and nutrient source.

Things to consider...

- Location
- Plant choices
- Depth
- Sizing
- Soil Amendments



Rain gardens can vary in size and shape and should be planned considering drainage patterns, size and quantity of surrounding impervious surfaces, and soil conditions. When well planned and maintained rain gardens can be a simple, beautiful, and effective residential landscaping element.



For questions or technical assistance for creating your own rain garden contact Ashley Fisk:
ashley.fisk@nd.nacdnet.net
701.282.2157 Ext. 3
www.casscd.org
www.facebook.com/CassCountySoil Conservation



Rain Gardens

Capturing the Rain of the Plains



What are the Benefits?

Beyond being low-maintenance, rain gardens have many important benefits that impact our community including:

- Absorb and filter stormwater runoff, reducing pollutants in our waterways
- Reduce flooding potential by decreasing water volume entering storm drains
- Reduce dependency on city or well water for landscaping
- Reduce the potential for soil erosion
- The absorption of stormwater runoff recharges precious groundwater sources



Rain garden misconceptions.....

“Native plants are ugly looking”

There are a few species that may be less attractive, however a majority of the native plants are very beautiful and some are often sold at local landscaping companies and home stores and can make a beautiful landscape feature.

“It will be a breeding ground for mosquitoes”

While their purpose is to capture and hold water it is for only a brief period of time; 24-48 hrs while it takes 7 days for mosquitoes to hatch.

“Only plants that require wet growing conditions will thrive in a rain garden”

These are not ponds. It is dry most of the time. A variety of plants that tolerate a wide range of conditions work best. Strategic placement of plants is key.

Why should you use native plants?

- Native plants have very deep roots that help infiltrate water, reduce erosion, and filter pollutants
- Native plants have adapted to handle both regular moisture levels in our soil as well as periods of drought and saturation
- Many native plants attract and provide a food source for pollinators



Blanket Flower



Lewis Flax



Black-eyed Susan



Purple Coneflower



American Vetch



Cost Share Rates

Practice	Cost Share Rate	Maximum Reimbursement
Rain Barrel & Composting Systems	60%	\$100.00 max
Pervious Paving	60%	\$1,000.00 max
All other practices listed	60%	\$500.00 max

About Us

The Cass County Soil Conservation District is a legal subdivision of the State of North Dakota with a mission to inform, educate and provide leadership in conservation and stewardship of soil, water and related natural resources. Following our mission, the District is responsible for carrying out programs of Soil and Water Conservation on all lands within the District boundaries.

This provides a means for the District to work cooperatively with landowners, organizations and interested parties in the conservation of natural resources.

Cost Share Services for Urban Conservation & Low-Impact Development Projects

Conserving resources for our future



2016-2017

How to Apply

Applications are accepted on a Continuous basis.

For application materials, visit the urban tab on our website at www.casscd.org

Application materials can also be obtained by contacting us at,

Phone: (701) 282-2157 extension 3
Email: ashley.fisk@nd.nacdnet.net

Contact Us

1665 43rd Street South
Suite 103
Fargo, North Dakota 58103-3319

(701) 282-2157 extension 3
Email: ashley.fisk@nd.nacdnet.net
www.casscd.org



Cass County Soil Conservation District
Stewardship for Today and Tomorrow



Cass County Soil Conservation District
Stewardship for Today and Tomorrow

Our Program



In an effort to enhance urban conservation efforts within our growing community, Cass County Soil Conservation District is awarding cost-share grants to landowners and organizations to improve our local water and soil resources while enhancing well-being within our community.

Cost-share grants will be awarded to landowners and organizations until cost share funding for each practice has been exhausted for the fiscal year. This program reimburses 60% of approved costs associated with implementing particular conservation practices up to a maximum dollar amount (see rate table). Landowners that can be better covered by other programs within the District or NRCS will be referred as needed.

please visit www.cassscd.org for full application guide

Eligible Practices

Water Conservation Home Systems

- Community education course and materials for first rain barrel or compost tumbler
- Adding on to existing rain barrel or compost tumbler system

Forestry Conservation Practices

- Arboretum
- Living snow fence

Alternative Landscape Practices

- Rain garden/Bioswale
(including rain garden in a box designs)
- Xeriscape
- Pollinator garden or pollinator habitat improvement
- Low mow turf grass planting
- Plantings using native grasses/flowers
- Pervious paving (block or concrete modular pavers; grid pavers)

Urban Riparian Area Improvement Projects

- Native planting for riparian forest improvement including bank stabilization and habitat improvement projects

Other Practices May Be Eligible on a Per Case Basis

Program Specifics



This program is open to urban and rural residents of Cass County, North Dakota. Practices funded under this program must also be installed within the boundaries of Cass County, North Dakota.

Applications are accepted on a continual basis pending Cass SCD Board of Supervisors approval.

Although we provide multiple avenues of assistance; procurement of materials, installation, labor, and maintenance work including all liabilities are the responsibility of the homeowner. Homeowners should expect to fund 100% of the cost of the project up-front. Funded practices should be installed within the growing year and should be maintained for at least five years.

Xeriscaping

What are the benefits of xeriscaping?

- Lower landscape water usage and costs
- Decreased landscape maintenance needs
- Reduced dependence on chemical pesticides & fertilizers
- Enhanced urban wildlife habitat
- Reduced storm water runoff
- Year-round aesthetic interest



Helpful Tips

To the casual observer, a prairie grass and wildflower landscape may be perceived as an unkempt lawn. However, steps can be taken to promote the introduction of a prairie landscape into the traditional neighborhood. Talk to your neighbors before installing the landscape and discuss the beauty, uniqueness, reduced maintenance and water needs, and other community benefits.

For more information contact Ashley Fisk:
ashley.fisk@nd.nacdnet.net



701.282.2157 Ext. 3
www.casscd.org

www.facebook.com/CassCountySoil Conservation



What is Xeriscaping?

Xeriscape (pronounced Zeer-i-scape) is the wise use of water through water-efficient landscaping and the utilization of plants better adapted to local climatic and soil conditions.



Xeriscaping

The 7 Principles of Xeriscaping

- Take visual inventory of your space and plan your design accordingly
- Improve existing soil conditions as necessary
- Locate lawns very strategically and consider all alternatives to lawns
- Use mulches to moderate soil temperatures and to conserve moisture
- Utilize plants that are native or well adapted to the geographical/climatic conditions
- Water efficiently
- Provide regular landscape maintenance

Xeriscaping Plant Choices

Native plant species are encouraged because they are adapted to your environment and will not require fertilizing or excess watering. Some plants native to Eastern North Dakota include:

Trees

- Golden Willow
- Chokecherry
- Common Lilac

Grasses

- Prairie Junegrass
- Little Bluestem
- Sideoats Grama

Ornamentals

- Black-eyed Susan
- Purple Coneflower
- Blanket Flower
- Purple Prairie Clover



Creating a Robust Local Food System in Fargo-Moorhead

Katie Black, Angelica Anderson & Kaya Baker
Students, Concordia College

Research Questions

- What does local agriculture currently look like in the FM area?
- What is the potential to create a local food system in the FM area?
- What are the unique obstacles in this area in regards to the food system, and can these be overcome by a more local food system?
- How can we incentivize a local food system, and what existing policies could be altered in order to do so?

Methods

- Interviews with stakeholders involved in the FM food system, CCFSI, Current Policies, Food Systems Plan, Food Access Planning Guide

Findings

- Climate
- Disconnect between community members, farmers, and policy makers
- Lack of centralization of farmers' markets
 - SNAP benefits accepted at limited markets
- Ease of acquiring farmland for new farmers/ease of becoming a farmer

Recommendations

- One Centralized local food source
- Food Systems Dialogue (modeled after Climate Dialogues)
- Amend current policies to stimulate local food growth

Questions and Discussion

CASS CLAY FOOD PARTNERS

February 1, 2017

History and Overview

Since the formation of the Cass Clay Food Systems Initiative in 2010, the Fargo-Moorhead food system has transformed significantly. New farms, businesses and markets have emerged, increasing opportunities to grow, buy and sell local food. New organizations are working to provide community gardens, to teach food skills, and to build relationships with fellow community members around the joy of growing, cooking and sharing local food. And many groups are working to address issues of hunger, waste and community food resilience. These are just a few examples of the great growth and improvements to our local food system. And we are just at the beginning.

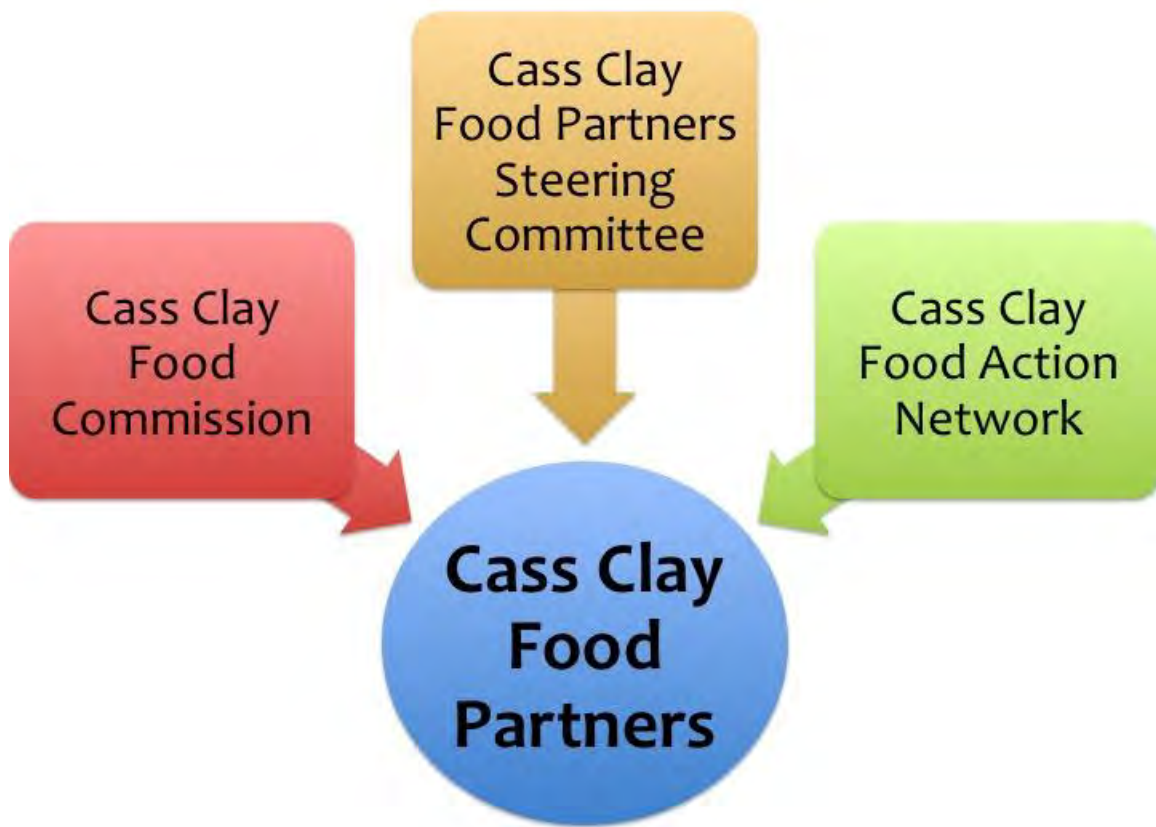
As our local food system has evolved, so has the Cass Clay Food System Initiative. In 2015 the Initiative formed the Cass Clay Food Commission, an intergovernmental board working to address food policy priorities in the six jurisdictions (Cass county, Clay county, West Fargo, Fargo, Moorhead and Dilworth).

Now, at this time in our community food systems growth, there is a need and opportunity to restructure the Initiative to best serve the community. The goal of this restructure is to help the community to better understand what we do and ways to be involved. Additionally, with the significant growth we have experienced in our local food system comes the need for more collaboration and partnerships so that we can all best serve the community to increase access to safe, nutritious and affordable food.

The Cass Clay Food Systems Initiative will now be called the **Cass Clay Food Partners**. The Cass Clay Food Partners include the **Cass Clay Food Partners Steering Committee** (advisory committee of key government agencies and local food system experts), the **Cass Clay Food Commission** (local policy board representing six jurisdictions), and the **Cass Clay Food Action Network** (a network of community organizations/individuals working together to accelerate food systems progress). The mission of the Cass Clay Food Partners is to increase access to safe, nutritious and affordable food for all residents by strengthening all aspects of the local food system.

The following outlines the three groups that encompass the Cass Clay Food Partners including their purpose, membership, meeting schedule, and opportunities to become involved.

Cass Clay Food Partners Structure



Cass Clay Food Partners Steering Committee:

Purpose: an advisory committee comprised of key government organizations and food systems experts working to provide direction, organization and management to the Cass Clay Food Partners, which includes the Cass Clay Food Commission and Cass Clay Food Action Network.

Members:

- **Fargo Cass Public Health: Kim Lipetzky**
- **Clay County Public Health: Gina Nolte**
- **NDSU Extension Service - Cass County: Rita Ussatis**
- **U of MN Extension: Noelle Harden**
- **Metro COG: Adam Altenburg**
- Area Planner: Hali Durand
- Project Coordinator: Megan Myrdal
- Blueprint Writer: Joleen Baker
- Food Systems Experts (up to 5): Abby Gold, Deb Haugen
 - o *Bold indicates core sustaining member organizations

Meeting Schedule: The Steering Committee meets on a monthly basis (or as needed) at Fargo Cass Public Health.

Interested in Joining: The Steering Committee allows up to 5 community food system experts to join the Committee. Please refer to the application found at _____. The Steering Committee has an ongoing application process but will make special calls for applicants if new members are needed.

Cass Clay Food Commission:

Purpose: To advise policy makers and elected officials in the Fargo-Moorhead Metropolitan Area on how to assure that residents have access to safe, nutritious and affordable food.

Voting Members:

- Governmental members – six (6) appointed by the jurisdiction they represent
 - o City of Fargo
 - o City of Moorhead
 - o City of West Fargo
 - o City of Dilworth
 - o Cass County
 - o Clay County
- At-large members – five (5) at-large members recommended by the Steering Committee and agreed upon by a majority of Commission members. Each shall serve a two (2) year term.

Ex-officio Membership: Ex-officio (non-voting) membership shall be granted to Fargo Cass Public Health, Clay County Public Health, the Steering Committee and Metro COG.

Meetings: Commission meets on a bi-monthly basis (January, March, May, July, September and November), the second Wednesday of the month at 10:30 a.m. Fargo City Hall.

Interested in Joining: The Commission includes five (5) at-large members who represent various aspects of the food system. Please refer to the application found at _____. The Commission has an ongoing application process but special calls for applicants will be made in the event of a vacancy or end of term.

Cass Clay Food Action Network

Purpose: To facilitate connections and leverage capacity of partners to increase access to safe, nutritious and affordable food for all residents of Cass and Clay counties.

Meetings: Meetings will be held on a quarterly basis at [REDACTED], and will run similar to the “One Million Cups” program.

At each meeting an organization leader will present their work to the Food Action Network. Following the presentation will be a 20-minute question-and-answer session with the Network.

These meetings will also include Network Updates where any network member can share upcoming events, projects or opportunities. This will be a great way to encourage cross-promotion of food-related events, and also find ways to engage community members and students in unique opportunities.

Finally, the Food Action Network will remain aware of the work of the Cass Clay Food Commission. Regular updates will be provided on the work of the Commission including approved blueprints and upcoming priority areas. *(add a “give and take” type statement)*

Goals:

- Educate
- Engage
- Connect
- Coordination
- Shared Action

Members: Open to any individual or organization working to advance the mission of the Cass Clay Food Partners.

Interested in Joining: The Food Action Network is open to any individual or organization working to advance the mission of the Cass Clay Food Partners. Watch for upcoming meetings at www.letseatlocal.org