

Date: December 8, 2023

To: The City of Bondurant

From: Miranda Faux, Tomas Hallsby, Patrick Hardy, Olivia Martin, and Anthony Mortale

Re: Bondurant “Green” Initiatives

Appendix: Attached

SUMMARY

Bondurant’s rapid growth has placed it at a critical juncture in its development. Embracing an outlook of sustainable development now will set a standard by which Bondurant can grow, as well as establishing a template that other blossoming communities to follow.

BACKGROUND

From the earliest census of the city until 1980, Bondurant remained a small city with a couple hundred residents. Since 2010, the population of Bondurant has doubled from just under 4,000 to over 8,000. As the population has grown, the city has attracted new businesses, most notably the arrival of an Amazon distribution center in 2020¹.

Bondurant is at a crossroads of sustainable design; with rapid population growth and a relatively small size, the city will run out of space for housing and commercial development if zoning laws and building regulations do not adapt to the pace of growth. While Bondurant has made some notable strides with regard to zoning and planning, as shown in the next section, the city should be mindful that its design plans account for the current trajectory of growth. If left unregulated, new developments may contribute to increased emissions, an exacerbated urban heat island effect, greater stormwater runoff, and overconsumption of electricity and water resources.

CURRENT EFFORTS AND SUCCESSES

Bondurant has already made some great efforts in sustainability that are to be commended and which can serve as an example for future projects:

1) Sustainability Awards²:

The International City/County Management Association (ICMA) awarded the Bondurant City Council and two city staffers with the Program Excellence Award for Community Sustainability.

¹ “QuickFacts: Bondurant City, Iowa.” *U.S. Census Bureau*, 2022.

² *ICMA Recognizes the City of Bondurant for Outstanding Local Government Program for Community Sustainability*, 1 Mar. 2021, www.cityofbondurant.com/home/news/icma-recognizes-city-bondurant-outstanding-local-government-program-community.

- This award recognizes local government programs that demonstrate innovation, excellence, or success in balancing a community's social, economic, environmental, and cultural needs.
- Bondurant won this award specifically for its Economic Development Launch program, which identifies properties for mixed-use development.
- The City of Bondurant also won the Resilience & Sustainability Award from the Iowa Chapter of the American Planning Association (APA) for its Central District Stormwater Improvements Master Plan³. This plan serves as a guide for improvements to stormwater drainage, which will mitigate flooding and provide better stormwater runoff management.

2) Bondurant Tree Board Committee⁴

The Bondurant Tree Board plays a vital role in the community, overseeing the upkeep and preservation of trees.

- Responsibilities include recommending ideal spots for new tree plantations and actively supporting the care and safeguarding of current tree inventory. For comprehensive guidance on various aspects of arboriculture, this page serves as a reliable resource throughout the year.
- Additionally, the National Arbor Day Foundation offers invaluable insights into tree identification via their website. Those joining as new members can avail themselves of ten trees or opt to donate them to a national park as part of their membership benefits.

BEST PRACTICES

We identified several other municipalities in Iowa that are doing work that Bondurant might use for future inspiration:

1) Linn County, Iowa – Sustainability Board

Linn County has a sustainability board made up of staff from its departments of Public Health, Conservation, Facilities, Planning & Development, Policy & Administration, and the Secondary Road departments. The board's overarching goal is to promote sustainability within county departments⁵. They also introduced an Internal Sustainability Plan with four goals; reduce greenhouse gas emissions, increase disaster preparedness, support local food systems/farmers, and continue improving the built environment.

³City of Bondurant, Iowa, *Recognized with Prestigious Resilience & Sustainability Award and Urban Design Award by the Iowa Chapter of the American Planning Association*, 6 Nov. 2023, <https://www.cityofbondurant.com/home/news/city-bondurant-iowa-recognized-prestigious-resilience-sustainability-award-and-urban>

⁴Tree Board, www.cityofbondurant.com/tree-board. Accessed 8 Dec. 2023.

⁵"Linn County's Sustainability Work." Linn County, www.linncountyia.gov/1659/Linn-Countys-Sustainability-Work.

2) Marion, Iowa – Parks and Recreation

The City of Marion boasts 21 parks, 29 green spaces, over 8 miles of urban trails, and numerous other amenities⁶. These include 81 pieces of playground equipment, 20 baseball diamonds, nine pavilions, eight restrooms, three splash pads, and one swimming pool. Along with these amenities, Marion has preserved 1,000 acres for pollinators where “low-value turf or vegetation already existed⁷. Marion also implemented a Master Trails Plan in 2014⁸ to ensure the city’s walking and bike trails continue to keep up with its growing population.

3) Johnson County, Iowa – LEED program⁹.

LEED certification ensures the sustainability of new and existing buildings. Each building meets requirements focusing on water and energy efficiency and air quality. They must follow a score card to be certified; it is a long process and can cost an excessive amount of money.

POLICY RECOMMENDATIONS

1) Create a Sustainability Commission (see Appendix B)

The purpose of this commission is foregrounding sustainability as a necessity for approving new development and educating the public on conservation and environmentally sustainable practices. The commission could be comprised of three people: two seats for city staff and a third seat for an elected resident. As Bondurant grows, additional seats can be added in multiples of three to maintain balance. All members would have a 4-year unpaid term. The committee could meet once every two months and may increase the frequency of meetings on an ad hoc basis. The Commission could create monthly programs to educate residents on issues related to sustainability, such as reduction in water use¹⁰ and solid waste, effective recycling practices, reduced energy consumption through sustainable building, and impacts of choosing native plants. Educating residents on these topics will help lower utility expenses and reduce water demand in the city. The committee might also create recommendations for sustainable energy generation, such as solar or wind farms.

2) Increase planting of trees and native grasses

This plan includes planting more trees in parks and near city streets. Trees providing shade on streets help a city save 60% of repaving costs by reducing expansion and contraction from heat¹¹. Additionally, they can reduce stormwater runoff by 845 gallons per year which provides protection from flooding and saves landscaping costs when dealing with flooding aftermath. Another part of this plan is utilizing low maintenance

⁶ “Recreation and Parks.” City of Marion, www.cityofmarion.org/recreation/parks-recreation/parks.

⁷ “Marion’s Commitment to Pollinators and Habitat.” *City of Marion*, 15 Mar. 2022, <https://www.cityofmarion.org/Home/Components/News/News/6961/17>.

⁸ City of Marion, Iowa. *Master Trails Plan*. 24 July 2014. <https://www.cityofmarion.org/home/showpublisheddocument/4852/636449547814700000>

⁹ “County Conservation Headquarters Building.” U.S. Green Building Council, www.usgbc.org/projects/county-conservation-headquarters-bldg.

¹⁰ “Irrigation Usage and Water Conservation.” Irrigation Usage and Water Conservation | Melissa, TX, www.cityofmelissa.com/453/Irrigation-Usage-and-Water-Conservation.

¹¹ “Community Benefits From Public Trees in Iowa.” *Iowa Department of Natural Resources*, iowadnr.gov/Portals/0/uploads/forestry/urban/CommunityBenefitsPublicTrees.pdf.

grasses like fine fescues and clovers. These require less mowing and watering than more commonly used species¹². Clover also deposits nitrogen into the soil, reducing the need for fertilizer. These grasses stay green in harsher conditions, lending to aesthetic value in city spaces. The third part of this plan is creating prairie strips. Small portions of parks, public grass patches, and farmland can be converted into strips hosting native grasses and flowers. Converting 1/10th of an acre of farmland to prairie costs about \$26-33 per year but benefits like mitigating flooding, reducing sediment and nutrient runoff, and providing habitat for birds and pollinators, outweigh the costs¹³. There are grants available for creating prairie strips (see Appendix C) but if the City doesn't want to hold the cost burden for these strips, an "Adopt a Patch" program can be implemented where residents who volunteer fund the maintenance of their respective prairie strips.

3) Implement a Plan for Civic Campus

The civic campus can be used as an initial push toward sustainable building practices in Bondurant. Sustainable building standards generally focus on reducing waste and pollution during construction, use of durable and sustainably sourced materials, and energy and water use efficiency within the finished building. LEED's standards are a good reference for developing Bondurant's construction standards¹⁴. LEED certification set an example for buildings to follow and made the construction market embrace sustainability, but certification is expensive (see Appendix D). The second part of this plan is to implement renewable energy in unused spaces around the campus. In one proposed layout, there is an open 2.52-acre plot that could be used for solar panels. This would generate an estimated 32 kWh of electricity a day and would cost between \$50,000 and \$90,000¹⁵. The final part of the City Plan is to transition city fleets to electric. Currently, it doesn't work to make all city vehicles electric, as the charging infrastructure doesn't currently exist. However, as more charging stations are put in around town, this can be an option in the future. A transition that can be made now, though, is in maintenance and operations tools like lawnmowers (see Appendix D).

NEXT STEPS

- Hold an open forum during city council meeting to plan sustainability commission:
 - Citizens give input about sustainability goals they want set.
- Contact vendors for pricing trees, grasses, native plants:
 - Cities like Marion may have contacts they recommend.
- Apply for grants (see Appendix C).

¹² Watkins, Eric, and Kristine Moncada. "Planting and Maintaining a Fine Fescue Lawn." *UMN Extension*, 2022, extension.umn.edu/lawns-and-landscapes/planting-and-maintaining-fine-fescue-lawn; Ealy, Sean. "How to Use Clover in the Garden: The Ealy Homestead." *The Ealy Homestead*, 29 Aug. 2020, theealyhomestead.com/2020/08/29/how-to-use-clover-in-the-garden/#:~:text=Clover%20is%20widely%20used%20as,after%20some%20pretty%20cruel%20winters.

¹³ "The Cost of Prairie Strips." *Extension Store*, May 2020, store.extension.iastate.edu/Product/15222.

¹⁴ "Leed v4.1 Building Design and Construction." *U.S. Green Building Council*, July 2021. <https://www.usgbc.org/leed/v41>

¹⁵ Chopson, Patrick. "Solar Panel Cost – Residential + Commercial." *Covetool*, 2023. <https://help.covetool.com/en/articles/4529706-solar-panel-cost-residential-commercial>

- Meet with contractors to determine pricing for sustainable building.
- Meet with Mid-American Energy to learn about rebates for solar energy.

APPENDIX I

APPENDIX A. Best Practices

The link provided will take you to Linn County Sustainability site.

<https://www.linncountyiowa.gov/1521/Sustainability>

The link provided will take you to Marion, Iowa Parks and Recreation.

<https://www.cityofmarion.org/recreation/parks-recreation>

The link provided will take you to LEED rating systems.

<https://www.usgbc.org/leed>

APPENDIX B. Policy Recommendation: Sustainability Commission

ORDINANCE NO. 29

CITY SUSTAINABILITY COMMITTEE ORDINANCE

WHEREAS the city recognizes the importance of sustainable practices in preserving and enhancing the quality of life for current and future residents;

WHEREAS it is in the best interest of the City to establish a dedicated committee to advise and assist in the development and implementation of sustainable policies and initiatives;

NOW, THEREFORE, be it ordained by the City Council of the City of Bondurant:

Section 1: Establishment

(a) There is hereby established a City Sustainability Committee (hereinafter referred to as the "Committee").

(b) The Committee shall operate as an advisory body to the City Council, providing recommendations and guidance on matters related to sustainability.

Section 2: Composition

(a) The Committee shall consist of 3 members appointed by the City Council, two of whom shall be selected from current city employees and the third of whom shall be a resident with relevant knowledge of or interest in sustainability who is selected through an application process.

(b) Members of the Committee shall represent a diverse range of expertise, including but not limited to environmental science, urban planning, energy efficiency, waste management, water treatment, and energy generation.

(d) Appointments shall be made based on the qualifications and commitment to sustainability, and members shall serve staggered terms of 4 years.

Section 3: Duties and Responsibilities

The Committee shall have the following duties and responsibilities:

(a) Advise the City Council on the development and implementation of sustainable policies, programs, and initiatives.

(b) Conduct research and analysis on issues related to sustainability and present findings to the City Council with the option for public input.

(c) Collaborate with City departments, community organizations, and stakeholders to promote efforts mentioned in section 2B.

(d) Monitor and annually evaluate the progress of the City's sustainability goals and make recommendations for improvement.

(e) Organize and participate in public outreach and education efforts to raise awareness about sustainability issues within the community.

Section 4: Meetings

(a) The Committee shall meet at least four times per year, with additional meetings scheduled as needed.

(b) Meetings shall be open to the public, and the Committee shall provide opportunities for public input.

- For public input, five minutes per person. For those that are representing a collective public interest they admitted ten minutes. The representative must forward a message to the council beforehand. All speakers must state their full name and address for public record.

Section 5: Reporting

The Committee shall submit an annual report to the City Council summarizing its activities, recommendations, and any proposed changes to the City's sustainability goals in the Comprehensive City Plan.

Section 6: Funding

Funding for the Committee's activities and initiatives shall be allocated through the City's annual budget process, through any council fundraising event and or through private donations.

Section 7: Effective Date

This ordinance shall take effect immediately.

APPENDIX C. Policy Recommendation: Park Plan

This link shows that fine fescues grow well in the Des Moines area and would be well-suited for use in Bondurant: <https://www.allamericanturf.com/blog/the-ideal-grass-types-for-beautiful-lawns-in-iowa-a-city-by-city-guide/>

This link provides more detailed information about prairie strips, along with available funding to support these types of projects: <store.extension.iastate.edu/Product/15222>.

This link gives examples of prairie grasses or flowers native to Iowa that the City of Bondurant can plant: <https://www.nrem.iastate.edu/research/STRIPS/dominant-prairie-plant-species>

APPENDIX D. Policy Recommendation: City Plan

Josh Busard, Johnson County Director of Planning, Development, and Sustainability

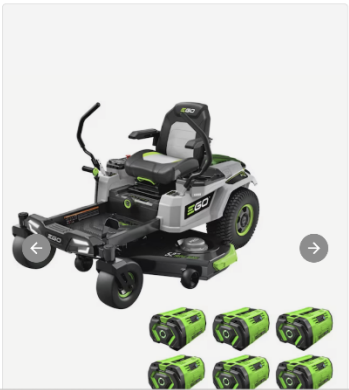
Becky Soglin, Johnson County Sustainability Coordinator

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