Brad Roos, Sustain Rockford: Part 1

SUMMARY KEYWORDS

Rockford, people, sustainability, sustainable, community, building, Dubuque, conference, water, illinois, aquifer, solar panels, city, Madison, state, sustainability officer

Haley: Hello, my name is Haley Dahl and I would love to welcome you to the first episode of the Green Exploration: Rockford podcast. Today, I will be meeting with Brad Roos from Sustain Rockford to discuss Rockford's environmental issues and explore sustainability within the community. The purpose of this podcast is to gather information to raise awareness in regards to the environmental issues in Rockford. While highlighting inclusive infrastructure solutions that the city may choose to implement. I just wanted to thank you for your time, and I'm really looking forward to this conversation. So, let's begin.

Brad: Okay.

Haley: So the first thing I would like to know is what motivated you to get involved with the environmental challenges in Rockford? Could you please give me some background information on your involvement, interest and motivation? And what projects are you currently working on?

Brad: I think it started when I was a boy scout. So when I was a teenager, young teenager, I was fortunate to be involved in a Boy Scout troop that was very forward thinking. And our troop leader used to take the qualified scouts up to Canada, into the boundary above, above the border of the US into Canada, into the Quetico Provincial Forest. And those canoe trips, I think, probably introduced me to some of the most beautiful environments I've ever seen. The water, clear enough to drink out of. It's very unpolluted, there are no people up there living and you're not allowed to bring boaters into the lakes. So everything has to be, you know, paddling canoes, and so on. And that was a wonderful experience, beautiful, beautiful environment. And and then I would occasionally see a floating gallon milk jug. And I, I was astonished and how this is wrong, how could someone do that, you know, lose a milk jug into the lake like that into such a perfect space. And so I guess I became interested at that point, I stayed somewhat interested in stayed active in scouts. But then, of course, which always keeps you in touch with nature. So there's always camping and all kinds of other experiences. I've I've been up into the Quetico Provincial Forest probably a dozen times since then. So it's become a favorite spot of mine, for many reasons. My academic background when I went to also the University of Illinois, but I

was in Champaign Urbana, was in chemistry and environmental studies, and also education, I had a double major. And so as I became more and more aware of the environment, and you know, Earth Day was coming online, at that point, I began to see the arguments for what are we going to do to be sustainable. There was also a very popular book at the time that was published by Paul Ehrlich called, “The Population Bomb.” And his argument was, there will come a time soon where the earth will no longer be able to support the number of people that are on it. And he alluded to the environmental issues as well as the basics of food and water.

And that was very troubling to me. That was extremely troubling to me. I remember one of the environmental studies classes that I took, as a grad student, dealt with what I'll now call the linear production model. And in a linear production model, you extract minerals and substances from the earth, and then you produce a product, and then you sell the product. And then when the customer is done with the product, the customer discards it, and it goes into a landfill. So a very linear process, and the professor that was teaching the class, and, and it was a lively discussion that day, on that topic. He pointed out that we, we pay for everything, but the disposal. When you pay for the product, when you buy the product, you don't pay for what happens to the product when you're done with it. And he said this is the fundamental flaw in our environmental polic, in our, in our economic policy, is that we just assume that this is a sustainable strategy, when in fact it is totally not sustainable. It is unsustainable. It's also, not only is it unsustainable, environmentally, but it's unsustainable economically, because eventually, to use the crude expression, don't poop where you eat. If you keep doing that, at some point, it's going to affect your whole quality of life and your health and so on. That stuck with me. I ended up teaching a class, high school class, in environmental studies and learning a lot more about it then. And then the 70s occurred, I was actually teaching in Puerto Rico at the time of the Arab oil embargo. And I witnessed firsthand the fact that the island of Puerto Rico, although it is not a state, so it was not subject to environmental protection rules. So it also has some of the finest deepwater ports in the world. And even during the oil embargo, oil tankers, ships were offloading oil to refineries in Puerto Rico, which are not subject to EPA standards. And so they could be very polluting refineries. And the oil industry was selling that oil, those fossil fuel products, the petroleum products, all the while saying that, you know, the Arab oil embargo is causing us to have to raise our prices, and so on, which was, I'm sure, partially true, the point was that there was a hypocrisy about that, and, and a deception about that, that most people weren't aware of. And it led me to be suspicious of the motives and the operations of the fossil fuel industry, because of what I had seen firsthand. Obviously, I'm not painting the whole industry with a broad brush here, but I'm just saying that that seemed wrong. During that time, during the Arab oil embargo, which was 1973, 1974, in the United States, there was such a shortage of gasoline that you had to go to the gas station, based on the license plate number of your car. So if your car license plate ended in an odd number, you could go on Monday, Wednesday or Friday. If it ended on an even number, you could go on Tuesday, Thursday or Saturday. Also, of course, during that time, that meant a shortage of heating oil for those furnaces that use fuel oil, and to some extent, natural gas as well, since some natural gas was being imported. As a result of that, president Carter at the time, would have some of his fireside chats kind of thing. And he'd say, you know, you got to turn your thermostat down. And you got to wear a sweater, and you got to conserve. And I don't know if you realize this, but before he was a politician, he was in the Navy. And he was also a nuclear physicist. His specialty was nuclear reactors in naval vessels. And so he was a scientist, and also a farmer, he grew up on and had his peanut farm in America’s Georgia. And so, you know, he was pretty

credible in terms of his science background, his conservative, let's be good to the earth kind of background. And as a consequence of all of that, you know, he was very believable. Interestingly, nobody liked hearing what he was having to say. Nobody liked the idea of just turn the thermostat down to wear a sweater. And I think it was a wake up call that was occurring at that time, that people simply didn't want to hear. And they didn't want to heed it. And they didn't. Even though, you know, I can't remember the guy's name, Haley. But in the 1950s, he had already, as a scientist, atmospheric scientist, he had already put together the data to show that if we continue burning fossil fuels, we would continue to raise the carbon dioxide level in the atmosphere, which would of course lead to greenhouse gas concentrations increasing, which would in turn lead to global warming and climate change. You'd already done that, that was in the 50s. He is the data from the observatory, and in Hawaii, Mauna Kea. And you can go online today and see that. So all of this was happening to me at a troubling time. And I also grew up during the tail end of the Civil Rights era. And the Vietnam War, which was in my world, I did not like that war, I thought it was a ridiculous war, primarily, in some measure, to protect the oil interests in the United States and Southeast Asia, not entirely. It's complicated, of course. So the point was that it was a time of environmental coming awareness. It was also a time when people were beginning to think about the sustainability of the planet, which they hadn't done in the 50s so much, and before. It was the time of social and political unrest, and then Nixon resigned. So I mean, it was a crazy time and my senses were alert and heightened on all of those topics, and I saw them all as interrelated. In the 70s, when I was living in champagne and teaching at that time at Central High School, we, we built an addition on our house, I guess it was shortly after that, and I, I included passive solar heating, stagger stud construction and passive solar pre water heating system for our hot water heater, and I became a member of the American solar energy society, which I am still a member, so I've been a member of that group for nearly 50 years, 47 years, I guess. You know, it's been a gradual growing awareness and I became more and more concerned about it. Rockford is my hometown. When I came back to Rockford in 1990, after 25 years in Champaign Urbana, and a little bit in Puerto Rico, I began working with Zion Development, which is a neighborhood development organization a little bit different than Habitat. And we began doing housing, affordable housing primarily, at a somewhat larger scale than had been done before. And you know, we hit some home runs, people were happy with what we were doing. We always tried to access additional funds for our projects so that we could make the projects energy efficient. This becomes very, very important in affordable housing. Let me give you an example. There is a city that I know of that was developing affordable housing. Well, it was Rockford and they were putting in electric water heaters and electric heat. They found that that was cheaper to do the construction work if they did that. And it is because with electric baseboard heat, for example, you don't need ductwork, it's a lot less expensive to install, to construct. The difficulty is, is that then when people have electric heat, electric water heaters that maybe don't have timers, and all electric stoves, their electric bills are very hot, can be very high. At that point, electricity was much higher than natural gas. And so while it was affordable for the people to maybe buy the home, it was not affordable for them to keep the home. So it was not sustainable. So I saw that and I said, well, we can't, we don't want to do that. We want to make sure that people can afford to stay in their homes. So we have to put in extra insulation, we have to put in high efficiency heating equipment, and make sure that the building has all of the possible advantages, the best windows that we can afford to put in the project, and so on, and any other bells and whistles that we could figure out money, you know, to support. So that became an increasing goal. For us. There's another reason for wanting to do that. And it has to do with the fact

that if you want to do neighborhood development, and you care about the neighborhood, then you really want the neighborhood to be sustainable, as well as the individual neighbors. So in order for that to be the case, my own professional experience and personal experience was that you need to make sure that you have a mix of incomes in your neighborhood, your neighborhood is diverse economically, in the same way that we need ecosystems to be diverse in the biological sense. So in order for us to be able to have a neighborhood where middle and upper income people would also feel comfortable living, you've got to make your housing pretty spectacular, you know, has to look great, it has to function well. It has to be, you know, nicely landscaped and so on. And it has to have progressive elements of energy efficiency and clean energy. So the last project that we did, and the building, which I am now sitting and where I live, is the Lantow Lofts building. And this building was a crime ridden building in the heart of Midtown. And it was getting worse and worse. So in about 2005 or six or so we bought the building, and we started renovating it. And we made it one of the greenest buildings in the county because we were trying to develop mixed income housing. And we wanted people with middle and upper incomes to join with people who were needing affordable housing as neighbors. And so we wanted to knock the socks off of people who were looking at our building. So it has a 25 ton geothermal heating and cooling system for the first floor and lower level. It has a solar preheat system that preheats the water before it hits the water heaters. So for example right now I checked just before our call and even in the cold winter like this, when water comes out of the ground at about 50, 55 degrees we have 360 gallons of water stored in the basement that are preheated by the solar panels on the roof and the solar panels are thermal, not photovoltaic, so the circulates a cooling and antifreeze solution through from the panel's through the tanks in the basement to preheat that water. The temperature was, before we started, was 72 degrees. Now that's this time of year, half of the year we don't need our water heaters. The solar panels on the roof heat up the water in the basement plenty, like to about 140 degrees or more. So nobody needs to turn their water heater on for about half of the year, so that saves that money. And that's a very affordable installation. Plus we got tax credits for it. So I guess you could say that it was a gradual increase in my passion for the topic. I think it has grown more and more. I think probably the catalytic event, was more recently, was going to Dubuque, Iowa in 2016, September, to attend a growing sustainable communities conference. And this was the ninth or tenth of these conferences that Dubuque had held. And I heard about it because of my friend Michael Smith, who said, you know, if you're concerned about the Keith Creek and Rockford and the flooding of the Keith Creek, you should see what Dubuque has done with the Bee Branch Creek, because they had a worse problem than Rockford even had, and they're really doing a terrific job of solving that problem, you should go see it. So we did. And we brought him along with us. And there were five of us that went, I thought, well, this would be a good refresher for my environmental interest and so on. Boy, I was blown away, blown away. It was astonishing to me what communities were doing, not what individuals or organizations so much, but what communities were doing. There were, I mean, there were 500 people there, many of them, I don't know what percentage, but a very significant percentage, like somewhere between a third and a half of the people represented communities that already had sustainability plans. And I thought, where was I when this happened? What, how did this happen and I didn't know this? I mean, you know, when you're doing community development work, neighborhood development work, you have to be in touch with community leaders, and in your own city and your own area, as well as in the rest of the state. I ran a statewide organization for 4 years. I did some national consulting, where was I? What, how did I not know this? So I came back to Rockford and I asked as many people as I

could reasonably find, in a short period of time, do we have a sustainability plan and I just didn't know about it? And everybody said, we've got a lot of sustainability language, but we don't have a plan in the same way that Debuque has a plan. So I asked a lot more people, should we get a plan? Let's go talk to some communities that have plans. So we went and visited Elgin, Illinois, they have a sustainability plan. And we met with their sustainability commission, talked with them some and got to know them and began a relationship with them. Their commission advises the City Council of the Elgin City Council on virtually anything that is of significance, including social issues, and how it might affect their communities sustainability. So that was Elgin. Then we went to Madison, and we were hosted by an organization there called Sustain Dane, you may know that Madison is in Dane County. And so this is a county wide operation. And Sustain Dane is a not-for-profit. They introduced us to their colleagues in the city of Madison, and also Dane County, and we met with all of them and then toured some sites. And Madison's both the county and the city's commitment to sustainability on all levels is breathtaking. It's all encompassing, it's holistic. And we were all very impressed. We went to a moving and storage company, you know, that would like if you're going to move across the state or the country or something, you call them up and say pick up my stuff and take it. They are now all paperless. They don't use any paper at all. And they did it for this reason. They also don't use cardboard, no boxes, they have reusable boxes that are plastic. They have solar panels on their warehouse. They have motion sensors on the equipment, like the, the lights in their vending machines. They found out that of all of the items in their office that we're using electricity and they did this by monitoring, the vending machines were at the top because they were running all the time, like refrigerators running all the time. So they put timers on those things to minimize that. So they really looked after everything. And we also went to Dubuque, we took a minivan of 10 or 15 people to Dubuque and had an hour and a half meeting as well as longer tour. We met with their mayor, their city manager, their Sustainability Officer and cities, now many of them have sustainability offices with more than one person in the staff. At least they may have a Sustainability Officer or a coordinator. And two of their other engineers, and they told us great stories about what was going on in Dubuque, and this is the one that stuck with us. And Paul Logli was this trip with us. Paul Logli is the President and CEO of the United Way of Rock River Valley and former State's Attorney, so he has a high profile on our community and has an awful lot of insights as to how it runs in a lot of different ways. He also went to Loras College in Debuque, so he knows a lot about Debuque. But he was also surprised by many of the things that he was learning from the city manager and the mayor and so on. They told this story, we got involved, we decided to become, you know, a star rated community, which is an EPA system, grading your community using seven different parameters, seven different areas with a matrix attached to that whole thing. They said, we started in on it, and we got a knock on the door. And the knock on the door was from IBM, and the IBM said, we want to locate our innovation center in your community, but make no mistake, we don't want to do it just because we want to do it in Debuque, for some reason, because of what you already are. We like where you're going. We like where you're headed. So here it was, firsthand evidence that a community's trajectory and commitment to sustainability and, and, and resiliency becomes primary in terms of where employers are looking to locate where employees want to be. They want to be in a community that wants to be sustainable, not just economically successful because it's extractive or not considering what they do. So that had a great impact on our whole group. And we came back and we met with people in February of last year, no, of 2019. And we asked the leaders, took 35 leaders, community leaders, this was pre-pandemic meeting, is this something we should do? And should we get, get busy, and we found this

organization called Seven Generations Ahead, which has planned, facilitate and run twenty two different greentown conferences throughout four states in the Midwest, Illinois, Indiana, Michigan, and Ohio. And the results of those planning sessions, those conferences have resulted in those communities developing and implementing sustainability plans. And we said, well, that's what we want. I mean, why reinvent the wheel when somebody else has already figured out a process that you can bring people together, and a successful process? So we asked people, do you want to do this? Does this make sense? And people overwhelmingly said, virtually unanimously, yes, we want to do this, this is, this makes total sense to us. So we want to do it. And so we went out and the organization that our little group ended up forming, which is called Sustain Rockford. Before that, we were the sustainability Working Group, Sustain Rockford went out and raised $20,000, from the city, Rockford, from the county from the park district, from the Visitor's Bureau from some private businesses and individuals and our own selves. And we hired Seven Generations Ahead, which is, as I said, maybe I said, is a not-for-profit, 19 year old nonprofit out of Oak Park, Illinois, we hired them. And we are in the process of planning. Now, we have a core planning team. And that conference is scheduled for the first week of November of this year. So by then we hope to be in person, we will hope for 150 to 300 people, people from any of three different key audiences. One would be those who are policymakers and implementers. Others would be those who have sustainability experience and expertise. And then the general public. So city, county officials and village leaders would be in the first group, those organizations and companies actually like Natural Land Institute or Specialty Screw company, which has got solar panels all over their place and natural prairie and has reduced their solid waste quite a bit. And then the general public with special emphasis, we think on education, you got to teach people these things and make sure that they understand how important they are. And so we're excited. We're excited about that. So that's the answer to your question.

Haley: Yeah. Thank you so much. That conference actually sounds very, very intriguing to me.

Brad: We're looking at some venues right now, we've, we've picked out a couple that we really like and we're getting ready to launch the campaign for corporate sponsorships and other spons– I mean, some individuals will likely be sponsors as well. We don't want to put all our eggs in one basket.

Haley: Yeah.

Brad: So we realize you can't just have a one day conference, wallah you have a sustainability plan. That's not likely to happen, you know, doesn't happen in, in your world as a student either, I'm sure.

Haley: Yeah.

Brad: So we're going to have a number of pre-conference events. And we think that some of those pre-conference events, maybe even quite a number of them, will in bringing people from Dubuque, from Madison, from Elgin, from other communities, Grand Rapids, South Bend, Indiana, when Pete Buttigieg was mayor had a Greentown conference, bring people from those communities, sustainability officers and say so how's it gone for you? How did you develop your plan? How did it work? How's it going now? What would you do differently? You know, so we can kind of learn from them. It's sort of like a

vicarious experience so that when you get started doing your own planning, you feel like you've already done it.

Haley: Yeah.

Brad: because you've heard how others have done theirs. We also want to hear from some businesses that have taken some dramatic steps to make their own businesses more sustainable. I was extremely pleased but quite honestly very surprised to learn that Collins Aerospace has on their staff a sustainability officer. And he has a master's degree in sustainable engineering, sustainable engineer from Madison, though not not from Illinois.

Haley: Yeah.

Brad: And you know, we'd love to hear from them what they're doing. Advanced Machine and Engineering has put maybe a million dollars with solar panels on their building. Benson Stone Company recently put a bunch of solar panels on their building, the Rockford region's wastewater treatment facility, which is just changed its name. I think it's called Three, Three Rivers, Water Reclamation or something they operate out of a LEED Platinum building is my understanding.

Haley: Oh.

Brad: They actually generate nearly enough, maybe even more, energy than they need to operate their own facility through biogas in the digestion process, the bacterial digesting process of the waste materials, so they are key to our region's sustainability. And yet, most people don't have any clue what they do. There are water resource people that I personally have been stunned by what I've learned from them. The Boone County Conservation District CEO over there gave a presentation to an environmental committee through the Region 1 Planning Council, he explained that good deal of the Chicago and suburban Chicago area sits on top of a shelf of rock. And that shelf of rock prevents groundwater from getting deep into the aquifer. So when they do drill, they are pulling water that's entering the aquifer from other parts of the state like ours. Well, since they have such a population density there, the draw rate is greater than the renewal rate at their location. So it's not uniform at all, in our region, in our actually, in our Indiana, Illinois, Wisconsin region is not uniform at all, the majority water deficit flow is in the Peotone area. There's the biggest deficit there, all of the rest of the water recharging is happening from the areas that ring around that, including our area and southern Wisconsin and Western Indiana. And the problem is, is that the rate at which the deficit is being developed is greater than the rate at which it's being replenished. So that means the entire northeast portion of the state of Illinois is running under a water deficit, which is not sustainable,

Haley: Does that include Chicago?

Brad: and at some point, you know, it will land. Yes, it absolutely does. So the consequence of that is, it's a slow, slow thing, because that water moves very slowly in the aquifer.

Haley: Yeah.

Brad: However, it is also not easily or quickly fixed. So water conservation, and permeable membranes and permeable surfaces everywhere that we can possibly create them, proper handling of the waters and streams and the waterways throughout the state. Those are all crucial to our being sustainable in terms of water. Hearing about that, it was shocking to me. And I think it would be eye opening to a lot of people. And then the social equity issue.

Haley: Yeah.

Brad: I mean, look at the times we're in here, we need to make sure that the things that we do, the policies that we engender, are also policies that are socially sensitive. So that, for example, when we offer solar to people, that it's not just rich people that get it.

Haley: I think it's really cool that you brought up the water conservation and the permeable surfaces, because actually, I'm writing a paper about how the implementation of sponge cities, how that's been done in China, and how that could be implemented in Chicago to solve Chicago's water problems. So I thought that was really cool. I think now would be a good time to wrap up part one of this episode. First of all, I would love to thank Brad Roos for sharing his insight and I'll be looking forward to hearing what else he has to say during part two of this discussion. I would also like to thank anyone listening in on this podcast. I really appreciate your support of Green Exploration: Rockford. My name is Haley Dahl and I will be signing off. Stay green and stay exploring, Rockford.