

VALPARAISO UNIVERSITY

# GREEN VALPO

## Earth Day Issue



Empty Cupboards — The Struggle for Millions | Old Campus Garden — A Sustainable System  
If You Build It, They Will Come — The American Obsession with Lawns  
21 Day Challenge for a More Sustainable You!



Julie Whitaker

Energy and Sustainability Coordinator

We often hear that climate change is the biggest issue of our time. Modern day advancements have made our lives more comfortable but at what cost to our environment and other species? It seems so difficult to make change when it affects everything around us, everything we are, and everything we ever will be. The first step for overcoming climate change is to understand fully the challenge we are in. All of us need to commit time to understand and learn about climate change. When we have gripped the severity, we can make road map to solve one of the biggest issue humanity has been faced with. Together we can learn and take action.

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March Against Climate Change

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Enhancing our connection with food, local ecosystem, and community



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## Empty Cupboards

Food is not guaranteed for millions

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# Care of Creation: an expression of hope

**Pastor Jim Wetzstein**

I believe in the... the resurrection of the body, and the life everlasting. Amen.

These last lines of the Apostles' Creed, a statement of faith shared by the vast majority of Christians are a declaration of hope in the promise of our eternally resurrected bodies. This ancient statement of belief has profound implications for environmental stewardship. A risen body needs to be somewhere physical.

The Apostle Paul, in his letter to the Romans, makes the connection between human salvation and the restoration of the whole created world explicit. He writes:

For the creation waits with eager longing for the revealing of the children of God; ... We know that the whole creation has been groaning in labor pains until now; and not only the creation but we ourselves, ... while we wait for... the redemption of our bodies. (Romans 8:19-23 NRSV)

The hope of the Christian faith lies in a restoration, a resurrection, of real human bodies in a real creation that is, as we well know, subjected to all sorts of brokenness. Much of it, we now understand, of human doing.

There was a time when it was assumed that creation was resilient enough to bear up under the unregulated exploitation of humankind. We now understand that this view was simultaneously arrogant and naive. While we don't understand every detail of every natural system, it appears clear that creation has its limits and human beings exceed those limits both to our own peril and that of all life on the planet.

But if the created order is bound for divine restoration, doesn't that free us from the burden of care? If the whole affair is going to be reworked anyway, what's the worry? (I should say that I've never actually heard of anyone arguing this, I bring it here as an extreme viewpoint.) In a talk given at Valpo during the Institute of Liturgical Studies, Charles Arand, a Lutheran theologian whose writing is increasingly on questions of environmental stewardship gave this observation. "If I have an antique desk that is need of refinishing, I hire someone who can do it for me. But just because I know that someone else will make it new again doesn't mean I'm going to set a sweating can of cold beer on it without a coaster!" If we believe that the whole creation is slated for restoration, for re-creation, that ought to call us to respect the gift all the more. This earth is not disposable. It is, from a Christian perspective, the object of divine love and creative care. We have the opportunity to be agents of that care in anticipation of the realization of the hope that is ours.

There are all sorts of good reasons for environmental concern. For Christians (and I imagine for people of other faiths as well), it is also an expression of devotion to God. It is a way of expressing both gratefulness and hopefulness.

Blessings this Earth Day



# Building a Local Food System

**Lee Keener: Parkhurst Dining Senior General Manager**



I have always taken my role seriously and feel that the food industry can certainly help to move the needle. I believe that understanding the where and how behind the source of our food is helpful. Also, the importance of sharing that message with the end users so that they can make informed decisions. Connecting the community with the source of their food has always been important to me. "Local Food" and "Seasonal" are more than just buzzwords, and can certainly make a difference if the providers and farmers are properly vetted to meet our standards. Supporting a local food system can have an effect of the use of pesticides, preserves small farm land, allows farmers to make more of the profit, and keeps the money in your community. Parkhurst Dining closely monitors our sources so that we can routinely avoid air-shipped produce so that we can reduce the Food Miles. I love working directly with farmers and producers as much as possible, and have made some lifelong connections.

While we still have some work to do making the connections surrounding Valpo, we did have the opportunity to bid on a few steer at the Porter County Fair last summer. Partnering with a consortium of University leaders, we purchased a pair that were raised by two amazing local 4H teenagers. All of the beef served during last year's Homecoming events were part of this purchase, as well as many other menus offered.

We are eager to take part in the Office of Sustainability Community Garden this spring and incorporate some on-campus herbs and vegetables into your dining options. In other restaurants, I have had the opportunity to work with many variety of hydroponic, aquaponics, and traditional terrestrial gardens. We were even able to add bee hives, roof-top chicken coops, and composting facilities to provide a cyclical experience for our guests.

Some of these initiatives were done simply to promote awareness and to be a part of something cool, but I do feel that we have a responsibility to exert pressure on the food industry by adjusting how we menu. By paying attention and understanding the impact, we are able to make decisions that reduce packaging waste, shed food miles, and improve the conditions of animal husbandry.

Moving forward you will see more focus on sustainability concerns as we strive to help you make informed decisions that keep you at your best and have a positive impact on your surroundings.

# Living Sustainably

**Lisa Harrington: Co-Owner of Mermaid Straw**

These days buzzwords like eco-friendly, sustainable, and carbon footprint seem to be everywhere but how do they really affect you? Do these things actually matter? To find out, you have to ask yourself how your day to day life impacts our environment. How much do you personally burden our planet in the name of convenience? Now, this isn't meant to be a guilt trip or all gloom and doom. After all, most don't intentionally set out to do any harm. An overpriced coffee here, some fast food there, maybe a cheap new shirt or some cute, new glittery eyeshadow... and before you know it, you've unintentionally accumulated an obscene amount of plastic that'll last five times longer than your own lifespan. We just throw these items away once we are done with them, thinking little of what "away" actually means. However, there is no away! Away ends up in our waterways, forests, parks, animals, and even in our own bodies!

We are a society of more, more fast fashion, more electronics, more fast food, more convenience. From contributing to climate change through animal agriculture to elaborate plastic packaging that's created to be waste from its conception, and keeping up with trends that promote fast cycling consumerism, we are all adding to the problem. We can't just turn a blind eye. These are facts. Sometimes these facts are hard to swallow but ignorance is not

bliss, in this case. Our planet depends on us making responsible purchases, decisions, and actions!

But there is good news! It's far simpler to reduce your footprint than it seems. Living sustainably doesn't mean giving up everything you love. It means loving what you have. It means being content, conscious and mindful. It means not falling prey to marketing gimmicks of "needing" more and more and more. Between finding sustainable alternatives to choosing more responsible products and companies, we speak with our dollar and our actions. Our voice is heard through who we support financially. Every purchase we make is a vote for or against a healthier planet.

Small investments in reusable items such as shopping bags, bottles and straws go a long way! Did you know you can bring your own cup into many chain and local establishments instead of using single use plastic? All it takes is creating a habit to change your impact. It's as simple as saying, "No straw, please!" or "I've got my own bag." There will be times you forget to ask or bring your own, but that's okay! Perfection isn't the goal, movement forward is.

Opt for local produce. Organic is best! Chemicals used in mass production of produce are detrimental to our bees, environment, and health! Plus, prices will often be lower and you'll be helping to sustain a local farmer's business. It's a win-win! Don't forget about the uglies! These pieces of less than perfect produce aren't winning any beauty contests and will often be discarded due to their appearance but they taste and function just the same. Food waste is a gigantic problem in this country. According to the USDA, a shocking 30-40% of food goes to waste in the US. Our obsession with perfection makes us lose sight of what the purpose of food is. Food sustains life. It should not need to win any beauty contests to be acceptable! And no one should be going hungry with how much extra food is already being produced and discarded.

Choose sustainably made, quality clothing. Fast fashion is inexpensive clothing produced in mass volumes in response to current trends. These pieces don't last long, are made of synthetic materials, and end up quickly in landfill. Think of it this way, if you buy a cheap article of clothing and get rid of it at the end of a season or it ends up with holes within a few months, you're essentially just throwing that money away. It's as good as tossing your money straight into the trash. Plus, these synthetic materials used in fast fashion are usually made from a form of plastic! When you wash them, not only do they lose their integrity and shape quickly, they shed microplastics in our water system that are too small to be filtered out. Opt for natural materials such as cotton or recycled materials. These days, you can find quality used pieces on a plethora of online sites for huge discounts!

Do a quick online search for green manufacturing and the humane treatment of workers. With so many resources out there, it's easy to find to properly sourced and quality fashion that outlasts the ever-changing trends.

When it comes to cosmetics, there is a lot of work to be done! So many companies mask their products with subpar chemicals laden with toxins with flashy plastic packaging. We see celebrities or Instagram "models" slathering their faces and bodies with layers of chemicals and feel compelled to do the same. "Miracle fix to every insecurity you have" for this or "this will make you look younger, hotter, richer and everyone will want you" for that. By convincing us that we need these products, we often overlook what they actually are... chemicals mixed with microplastics inside plastic, wrapped in plastic. The Environmental Working Group's resource, Skin Deep, is an invaluable tool to know exactly how the products you use affects yourself and the environment. With so many clean beauty products out there, there is something for everyone.

Hands down, the best part about living a more eco-friendly life is that less actually equals more... money saved! That's a "more" to get behind! When making sustainable purchases, choose wood, metal, and glass over plastic. Plastic items tend to break and get thrown "away". Choose local over industrial. Choose natural over synthetic. It's up to each one of us to be aware, awakened and speak up for our planet with our buying power and our choices.

# Can I recycle this?

Jess Keller: Office of Sustainability Outreach Intern



Recycling is what many see as something familiar, and trusted in our communities to help decrease our environmental footprint as a whole. With this said, do most recycle correctly? You would be shocked to hear that answer is no. Many still hold all of their recyclables in plastic bags and toss them in the trash, or they place plastic wrapper as well as used pizza boxes in recycling. Why is this wrong? They all have their own reasons, but they are not recyclable. Plastic bags aren't exactly exempt from being recyclable, but they cause a lot of problems in the process. Your candy and chip wrappers are made from plastic film which is hard to sort and many places won't take the material. *Pizza* what many college students may see as a nice Saturday night meal with friends, and when it comes time to discard the box they may be surprised to find out they cannot. Now, recyclables do not have to be *pristinely* clean but pizza boxes are mostly paper, and I am sure you have all seen the oil residue a pizza leaves on the box it calls home until you devour it. The box absorbs so much oil that it can no longer be recycled.

Recycling, as you can see, isn't as straightforward as many believe it to be. Each plastic has those different numbers that mean different things, each item has certain rules, and each town may even be different in their recycling fashion. Recycling is used from plastics, to clothing, to paper, to electronics, but it isn't effective unless people know how to do it correctly. If you are unfamiliar with how to recycle, just research the item you wish to recycle and you should find a plethora of

resources on why or why not that item can be recycled. The more research you do the more familiar and comfortable you will become, and eventually confident.

Why is it so important that you recycle? I bet many are asking this question as I hammer you all with what may seem as a childish response to recycling, but the reasons are not as kid friendly. We are living in a world where each person consumes microplastics in every meal. We find dead birds trailing the shorelines with their bellies full of plastic, the plastic in their stomachs making them starve to death. We have the great pacific garbage patch, killing our oceans and its wildlife. We have landfill runoff, ruining homes and communities. There have even been incidents of landfills flooding and killing communities. This problem is bigger than many may see, and recycling is step one. Even with recycling many have seen that change does not occur unless we address a big problem with an even bigger response. Consumerism is a giant problem in this day in age, and is a top contributor to pollution of all kinds that we face today. To minimize the problem the solution is a lot simpler than many may believe. Simply, stop buying more, and adding more waste than we already have.



## 8 Things You Thought You Could Recycle, But Cant

1. Plastic Bags
2. Plastic Straws
3. Ceramics
4. Wet Paper
5. Coffee Pods
6. Tissues
7. Chip bags
8. Coffee Cups

Review Valpo University's Recycling Guidelines Here: <https://www.mydisposal.com/resources/recycling-guide>

# MIXED RECYCLING

 Empty
  Clean
  Unbagged



### Paper and Cardboard

Glossy paper, flattened boxes and cardboard, newspaper, envelopes, magazines, and empty cartons.



### Plastic

Empty bottles, jugs, containers, and tubs — NO food or liquids. Re-attach lids and caps.



### Metal

NO food or liquids. Lightly rinsed pop cans, soup, and vegetable cans.

## WHEN IN DOUBT, THROW IT OUT!



NO Bags  
 NO Cups  
 NO Liquids

# TRASH

The following items CANNOT be recycled and must be discarded as trash:



Wrappers and Pouches



Disposable Food Items



Single-Use Plastics



Styrofoam



Plastic Bags and Film



Foods and Liquids

# If You Build It, They Will Come

**Bharath Ganest Babu: Geography Professor**

## Lawns

A few years back, our family decided to move away from city living to the county. After our home was constructed, the land was graded and seeded with fescue. Seeding was done in June after the spring rains had passed and was very costly to us, so it became my mission to nurture these grasslings. My mission quickly turned into obsession – watching the weather for rain, researching and purchasing irrigation toys, and then when the grass grew too tall, and needed cutting. I found that buying a riding lawn mower required a cultural shift in my mind. More research, more money, more time. All for the love of grass! I discovered that it was fun riding my mower and cutting grass. Why not? I just had to sit on that thing, hardly having to move a muscle and yet feeling a sense of accomplishment. Plus, I spent time outdoors and checked that box!

Every time I sat on my mower, or filled its tank, I was also acutely aware of how my lawn had managed to make me work for it. I was tortured by the futility of mowing and its cumulative and deeply detrimental effects on our natural systems. Deep rooted flowering plants have been replaced by these visually uniform monocots. Rainwater that would otherwise be intercepted and decelerated now runs off of grassy surfaces just like it would on impervious surfaces. Fertilizers and selective herbicides that we apply to our lawns find their way into our water systems. In drier periods, we use precious freshwater to keep lawns green lest our neighbors look better. Some of this would even make sense if we were expending our resources for growing food for ourselves or for the wildlife. However, slaving over ornamental turf grass that provides very little value except for a perceived sense of comfort seems like madness.

We help lawn grass by going to war with all its competitors. We accomplish this task by using gasoline powered machines, fertilizers, and herbicides that pollute. It is estimated that in 2018, roughly 136 million pieces of gasoline powered lawn and garden equipment were in use in the United States. Such equipment emitted approximately 6.3 million tons of volatile organic compounds and 20.4 million tons of carbon dioxide in 2011. In the US alone, turf grasses cover 16 to 20 million hectares. Overall, this sort of use of land is a certain display of undeserved excess for which future generations will have to pay.

## Insects

Did you know that millions of bees are shipped in tractor trailers to California in order to pollinate the almond trees and fruit orchards? California, which produces 80% of the global almond supply, needs about 30 billion bees shipped from out of state. Pollinator transportation is nothing new, though. Beekeepers have made an income by renting out the services of their bees since the 1800s. Pollinators provide an important service to the more than \$5 billion almond economy, but also most of our food supply. However, we have taken pollinators for granted and actively worked towards eliminating them from our natural environments. Beekeepers across the United States have lost 40.7% of their managed colonies between 2018 and 2019. Unscrupulous practices by agribusiness corporations, indiscriminate and overuse of pesticide, land use change, and climate perturbation are putting pressure on these important living components in our environmental system.

If the moral argument for conservation doesn't resonate with the public and policy makers, surely the economic argument for improving environmental quality for pollinator survival should. As larger policies evolve in their own time, what can individuals and organizations do now? Many of us have seen videos and photographs online showing wildlife casually strolling in urban areas as people are on lock down due to COVID-19. It took merely a couple of weeks after the abatement of human activity for wildlife to feel comfortable. Surely, if the habitats are conducive, wildlife will seek them out. Can we start with small steps in our own backyards? ...Continue to page 9



Image 1: Aerial view of campus, showing the lawn representation

...Continued

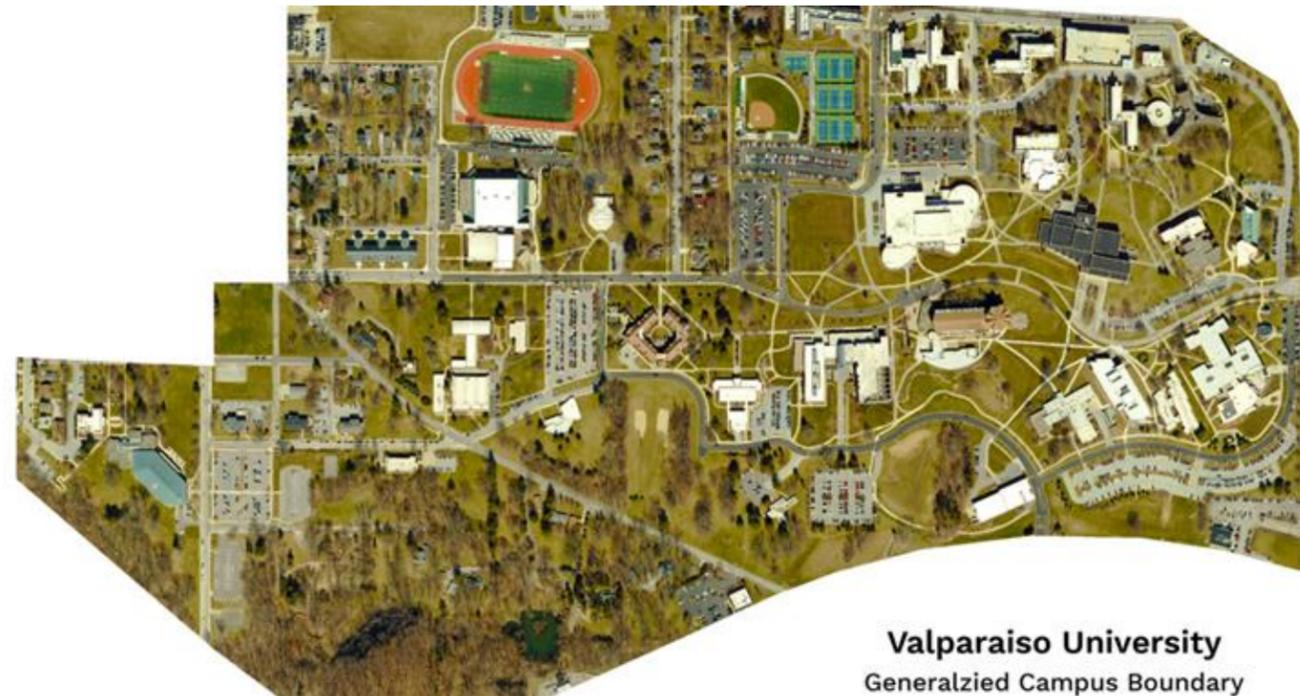


Figure 1: Valparaiso University campus. Natural color view of digital orthophotograph, 2018. This is a 4 channel data that includes near-infrared (Data source: Indiana spatial data portal)

## Half-Earth

Edward O. Wilson advocates for a moon shot to protect our natural environment. He calls for setting aside half the planet to non-human life. I personally tend to agree, although I must admit I am also in a position of resource privilege that is not afforded to the majority of humanity. Half-earth model in practice would be most detrimental to the poorest in this world. However, the privileged amongst us can possibly apply this model to own backyards. It only takes a change in perspective to set aside half of our yards to native plants.

My family decided to set aside more than half our land to native prairie by having it seeded with pollinator friendly native plants. This spring will be second year since seeding, and I am excited to see what pops up. I already see birds and bunnies taking shelter in the prairie. I can't wait to make my small offering to the local pollinators. I hear from my former students who live in the area, and they are enthusiastically seeding their yards with native plants.

How do we convince the rest of us? What would it take to see this sort of change in Valparaiso University too? Can we take a leadership role in proactive commitment to environmental change on campus? I wanted to see what our current inventory looked like. So, I did some of back-of-the-envelope estimation of major features on our campus. From an aerial photograph (Figure 1), acquired in February 2018, I extracted major land cover features (Figure 2). You will notice that the new oval quad near the engineering building is missing, as it was built in 2019.

The analysis is by no means very rigorous, but it yielded some interesting insights. I found that roughly 46% of our campus is turf grass. Could we cut this area in half by allowing peripheral areas to reestablish native prairie plants? It is encouraging to know that the Valparaiso University Office of Sustainability recently worked with one of our alums – a county district conservation manager – to use their Great Lakes Restoration Initiative (GLRI) funding to set aside two small corners of the campus for native planting. As I understand, there are several kinks to be worked out, but I am hopeful that we can take small steps towards this important transformation.

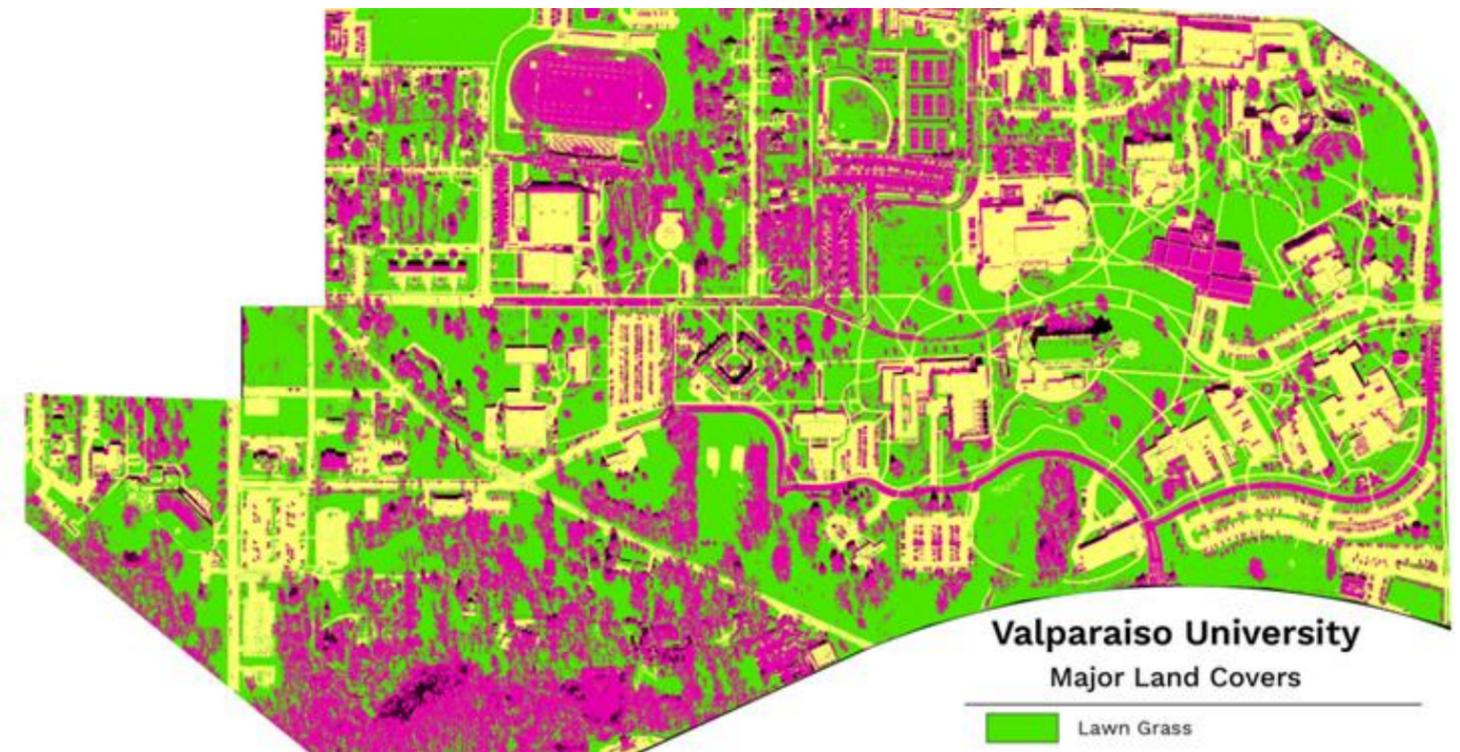


Figure 2: Major ground features extracted using computer classification. Lawn grass occupies ~46% of the campus area.

# Parks & Pathways MAP



# Dishing The Dirt

Julie Whitaker: Energy and Sustainability Coordinator

Each year the Environmental Working Group (EWG) announce the top fruits and vegetables that have pesticide contamination. The Pesticide Data Program (PDP) is a national effort from the U.S. Department of Agriculture (USDA) that test for pesticide residue. This USDA testing helps ensure the safety and fair marketing of U.S. agriculture products. The PDP manages the sampling, testing and reporting of pesticides from domestic and imported foods. By law, the Environmental Protection Agency (EPA) regulates the amount of pesticides that may be used, and remain on foods once it's marketed in the United States. Pesticides still shown on food are called tolerances. Tolerances on foods were established by the EPA, based on the crop residue trial data and the potential risks for pesticide exposure poses to human health or the environment. Good agriculture practices should be followed to not exceed the expected tolerance levels. Through use of the PDP database, the EWG has listed the fruits and vegetables showing the highest pesticides residues. The list also includes fruits and vegetables regarded as least contaminated by pesticides.

## EWG'S 2020 DIRTY 12™

- |                 |             |              |
|-----------------|-------------|--------------|
| 1. Strawberries | 5. Apples   | 9. Pears     |
| 2. Spinach      | 6. Grapes   | 10. Tomatoes |
| 3. Kale         | 7. Peaches  | 11. Celery   |
| 4. Nectarines   | 8. Cherries | 12. Potatoes |

## EWG'S 2020 CLEAN 15™

- |               |                        |                    |
|---------------|------------------------|--------------------|
| 1. Avocados   | 6. Sweet Peas (Frozen) | 11. Broccoli       |
| 2. Sweet Corn | 7. Eggplant            | 12. Mushrooms      |
| 3. Pineapple  | 8. Asparagus           | 13. Cabbage        |
| 4. Onions     | 9. Cauliflower         | 14. Honeydew Melon |
| 5. Papaya     | 10. Cantaloupe         | 15. Kiwi           |

# Overshoot: Sustainability and Scaling Back

**David Western: Lecturer in Humanities and Political Philosophy**

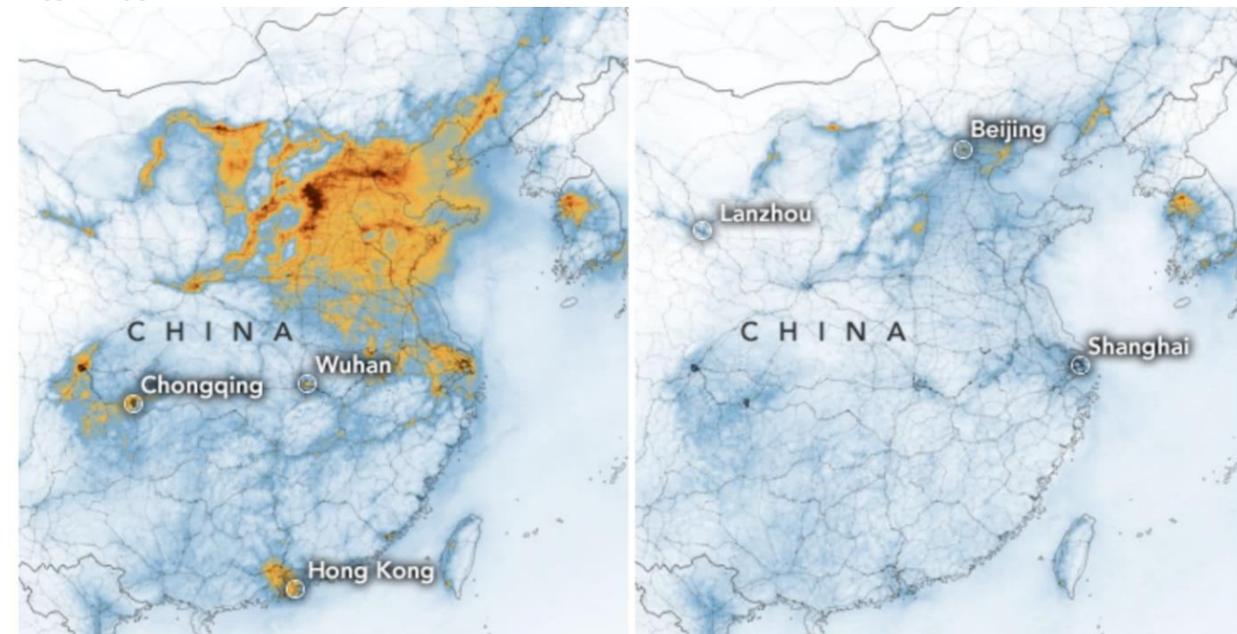
For how many years have Los Angeles skies been the very emblem of our problems with urban smog? And yet for the week of Easter 2020, air quality was so improved in LA it ranked amongst the most breathable cities in the world. According to IQAir, a pollution monitoring technology company out of Switzerland that watches air quality in urban centers around the globe, air in LA was cleaner that week than it had been since 1995.

Of course, the more breathable air was an unexpected, happy accident in an otherwise miserable, and for many people deadly, moment in American life. As the coronavirus swept invisibly through the country, stealing too many lives in its morbid parade – as the United States became the most casualty-stricken nation in the world – efforts at abating the spread of the disease meant Americans stayed home, and the economy seized. Like hitting the brakes too suddenly on a rocketing car, the ever-spinning American economy sputtered and choked into dangerously halting territory. All of a sudden people weren't out spending, money wasn't flowing, businesses were collapsing, rent wasn't getting paid, and within the space of mere weeks at least 16.6 million Americans filed for unemployment. Microscopic invaders brought the world's most gigantic national economy to a painful stumble, with unprecedented speed. In the most affluent and consumptive country that human history has ever produced, tens of millions suddenly found themselves unsure how they were going to keep themselves housed and feed through even just the coming weeks.

In this image of healthier Los Angeles skies breathed into life by way of a tanking economy – in this image of economics and the environment at odds, their respective healths increasing and decreasing in inverse proportion to each other – we see the deep conundrum, the tightened knot, that humanity has brought ourselves to. In order to make modern life sustainable – in order to live within the balances and the means of the planet – ultimately we're going to have to curtail the way we live today. Our thriving, ever spinning, ever bustling rush of production and consumption, of working and making and getting paid and spending and bringing new things home and rushing off to work again – ultimately all of that will have to de-escalate.

Over a century, in that ever spinning, ever bustling way of live, we've seen the exponential growth of the human population, of wealth and human-made "stuff," of resource extraction from the Earth to make that stuff, and of waste and pollution back into the Earth, in ways that now press well beyond sustainable limits. Every year the Global Footprint Network marks Earth Overshoot Day - the day when we've consumed more resources that year than the Earth can, over a year, regenerate back. In 1970 that day was in December. In 2019 it was July 29<sup>th</sup>. The organization estimates that humanity now requires 1.7 Earth's to maintain modern life – and our resource demands are exponentially growing. Nor is there nearly enough time to put enough green energy technologies in place to meet them.

As the list of ecological consequences to our unsustainable lifestyle grows – from climate change to Australia-like forest fires to rising sea levels to disappearing freshwater to the planet's sixth mass extinction event – the question is no longer whether or not we have to curtail our modern lifestyle of production and consumption. The question now is whether we'll do it ourselves, with some modicum of humaneness and foresight, or whether we'll be forced into it by a changing environment increasingly hostile to human life – the way the coronavirus produced a suddenly hostile environment that plunged us unprepared into painful emergency. Local efforts at sustainable living – in our homes, on campus – are necessary, but in themselves insufficient. We verge on urgent enough times that the pathway to a sustainable way of life must involve large, nation-level and even global-level refashioning of capitalism itself, and my great worry is that we haven't even begun to talk about reducing production and consumption seriously enough, in a way that won't disproportionately punish the renters, the low paid workers, and the most vulnerable, as the coronavirus-driven economic downturn has.



NASA's Earth Observatory pollution satellites show "significant decreases" in air pollution over China since the coronavirus outbreak began.

# Waste Not

Shannon Ilg: Energy Intern



Here in the United States, we throw away incredible amounts of food. About 30% to 40% of the food produced to be sold in the US is thrown away. One problem with this, besides needlessly wasting resources, is the 16% of Americans that are suffering from food insecurity. Grocery stores in the US throw away 43 billion pounds of food every year. If we were able to redistribute the food before it went bad and feed all those in need, we still would be throwing away perfectly good food. Perhaps it isn't all edible when it's thrown away, but it is a matter of redistributing the food while it is still

edible so it feeds the people in need. More often than not, food is trashed for very superficial reasons; bruises or otherwise less than prime looks, expiration dates, and new shipments or overflow. However, if food is recalled or rotten, it all gets thrown out in the same place.

This begs the question, why do we create so much food? And why is so little being done to prevent such a large amount of food waste?

The first thing is to not buy more food than you can eat. If everyone purchased only the food they would be able to eat, stores may be more compelled to order less food. So is there another option?

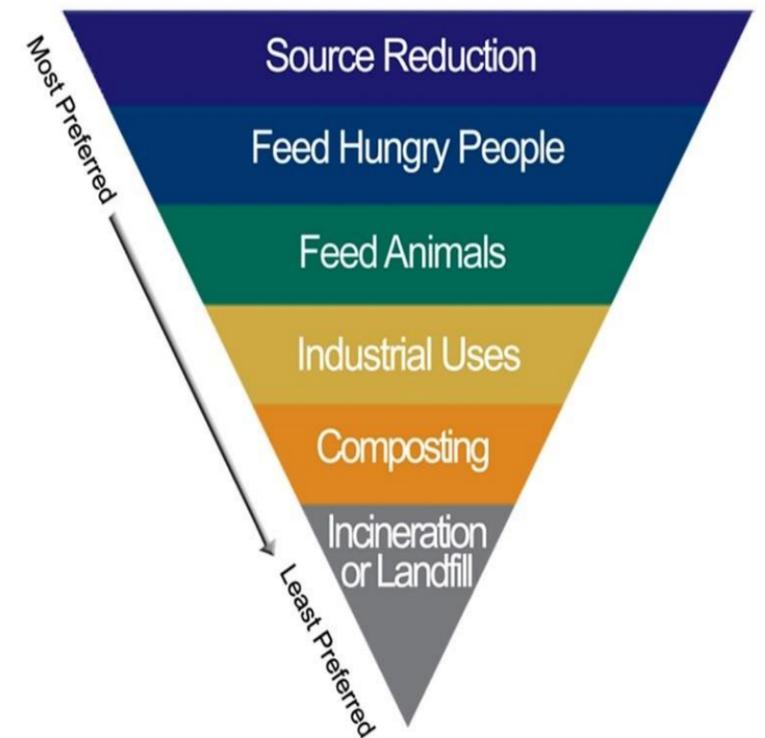
This past summer, I joined a few friends and took up the hobby of dumpster diving for food. I say this with hesitation because talking about dumpster diving is a bit of a gray area, as it comes across as a dirty food source. It also seems like it would be stealing, as you're taking something without paying for it. However, in most places dumpster diving is not illegal, but it is important to be aware of any local or state laws that may condemn dumpster diving, and trespassing.

In addition, I don't want to encourage dumpster diving. I wish grocery stores would just have a 'damaged produce' section. They could sell damaged or older fruits and vegetables for the half price I have seen some local stores do this but it's not usually very much simply for the fact that they are smaller stores. Another way they could prevent food waste is by donating the overflow of food or when it's nearing the expiration date, donate to a local nonprofit food bank. . But since 1996, the Good Samaritan Food Donation Act has been in place to protect businesses from donating food to nonprofits.

This summer, my friends and I have saved an incredible lot of food from being put into a landfill. I

think dumpster diving is more than just saving money. There is a bigger goal; perhaps what my friends and I have saved from a landfill is nowhere near enough to make a dent in the problem physically, but we can spread knowledge about the food waste problem that this nation has.

## Food Recovery Hierarchy



\*USDA and EPA created the food recovery hierarchy to show the most effective ways to address food waste

# How is Valparaiso University addressing the plastic waste problem?

**Julie Peller: Professor of Chemistry**



As long as your eyes are open, you won't have a problem seeing plastic waste. It is everywhere. Plastics are manufactured in tremendous amounts, and a significant quantity is made for one-use. Plastics are not biodegradable (they will last for hundreds of years or more), yet most people still do not think much about taking that plastic bag at the store to carry out their purchase. After all, it only took millions of years to make the virgin materials used to manufacture the plastic – which is often immediately discarded. Of course, this makes no sense. However, it sadly reflects the diminished valuing of the earth's resources by a society programmed to accept disposal stuff every day. The quantity of plastic waste will increase with sky-rocketing production of plastics... unless we decide otherwise.

Over 8 billion metric tons of plastics have been manufactured worldwide, and much has polluted the environment since a significant amount has been manufactured for short-term use. An estimated 6 billion tons, or ~75% of the produced plastic, has turned into plastic waste.<sup>1</sup> According to the US EPA, more than 26 million tons of plastic waste were discarded in landfills in 2015 in the United States. Nature is unable to decompose these synthetic materials. Instead, plastic products have been undergoing mechanical breakdown into smaller pieces for decades. The plastic has not decomposed or disintegrated, even when it is present on micro and nanoscale scales.

As long as your eyes are open, you won't have a problem seeing plastic waste. It is everywhere. Plastics are manufactured in tremendous amounts, and a significant quantity is made for one-use. Plastics are not biodegradable (they will last for hundreds of years or more), yet most people still do not think much about taking that plastic bag at the store to carry out their purchase. After all, it only took millions of years to make the virgin materials used to manufacture the plastic – which is often immediately discarded. Of course, this makes no sense. However, it sadly reflects the diminished valuing of the earth's resources by a society programmed to accept disposal stuff every day. The quantity of plastic waste will increase with sky-rocketing production of plastics... unless we decide otherwise.

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Image 2: Microplastics found on beach

...Continued

Professors at VU have been taking part in the mounting studies on the massive amount of plastic waste present in small pieces, those considered milli-, micro- and/or nanoplastics and the consumption and effects on aquatic organisms. Microplastics are mostly defined as plastic pieces 5 mm and smaller. Most microplastics are smaller than 1 mm and invisible to the human eye. My lab has been focused on the detection of microplastics known as synthetic microfibers. If you wear fleece, sportswear and other types of clothing manufactured from polyester, nylon, acrylic and other man-made polymers, you are wearing plastic fabrics. They all release microscopic fibers, and the more fluffy and thick the fabric, the more fibers that are released in the washing machine and in general. We estimated from our studies that about 4 billion synthetic microfibers are released into Salt Creek, which flows to Lake Michigan, each day. These microfibers are found pretty much everywhere and we all have them in our bodies.

Drs. Eberhardt, Watters, and Dick are investigating the responses of living organisms in the presence of plastics and microplastics. In Dr. Eberhardt's lab, the impacts of microplastic pollution on the behavior of aquatic organisms, especially mollusks, are studied. This is an emerging environmental concern as we learn more about the negative impacts that microplastics can have on living organisms. Mollusks appear to be especially vulnerable and the focus of the Eberhardt lab is currently on both zebra mussels and freshwater snails. Their snail research has revealed that exposure to polyester microfibers has an impact on both mortality and reproduction. Work with zebra mussels suggests that exposure to plastic microfibers from aged marine rope may change how mussels attach to hard substrates.

To spread knowledge on the topic of microplastics to more students, the VU Chemistry Department has implemented experiments for the General Chemistry lab courses. They involve the methodologies that isolate synthetic microfibers in sediment and soil. Dr. Rowe spearheaded a publication in the Journal of Chemical Education describing these experiments. Dr. Leach presented the general chemistry experiments last August at a national meeting and is working with her students this semester to link everyday plastic to microplastics. Her students are using the Litterati app to record the waste and its location, which adds to an international database on plastic waste. Over time, all the visible plastic debris in the environment can turn into micro- and nano-plastic waste.

My Environmental Chemistry class started a project this semester to assess local plastic litter and relate it to the plastic contamination in the Porter County compost. The local municipalities collect curbside leaf and yard "waste" in the fall using a large vacuum hose to load it onto their trucks. This unfortunately collects street debris (plastics mostly) along with the yard "waste." These natural materials (leaves and grass) will decompose and form compost (dirt) which is available to the community. Of course, the plastic does not change. I have taken many buckets of this soil home for my gardens and have been stunned at the amount of plastic contamination. In the class project, the students use an instrument called an Infrared Spectrometer to determine the type of plastic. We are currently analyzing the data and plan to share it with the County Recycling and Waste Management department and the greater community.

Valparaiso University Food Services has made changes in procedures and packaging to reduce one-use plastic waste. Reusable bags are encouraged in the dining facilities and many of the plastic packaged foods are no longer available. An interdisciplinary group of faculty are meeting with community leaders to discuss ways to reduce plastic pollution. Education and awareness of this colossal societal challenge is critical for solving the problem that not only affects current populations, but will affect future generations: our children and grandchildren. The information needs to be communicated to the greater community and accompanied by actions to reduce plastic waste through both front end changes (substitution of plastic products, especially one-use items) and back end modifications (greater reuse, recycle, reform, clean-up) and overall ingenuity.

Decide to be part of the movement toward less plastic waste. Reduce, reuse, refuse, recycle



Image 3: Valparaiso University students monitor water quality

# Empty Cupboards

**Andrew Raridon: Assistant Professor of Sociology & Criminology**



At the first word of the coming shelter-in-place orders to slow the infection rates of COVID-19, many people all did the same thing—they went grocery shopping. While some were quick to snap up the last packs of toilet paper and boxes of pasta, others were met with empty shelves that were largely picked over. This was an unsettling sight, but one that is an unfortunate reality for millions of Americans every day, pandemic or otherwise. In the US, about one in ten households (and one in seven households with children) struggle to remain food secure—to be able to afford and gain access to enough food to stay healthy and fed. For folks living in precarious financial situations, empty shelves at home or in a local food pantry, and a generalized anxiety about whether they have enough food to stretch for another couple days, are commonplace.

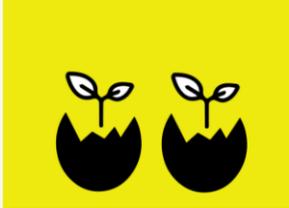
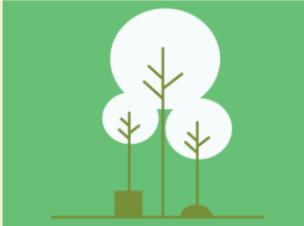
Sheltering in place is a privilege for many, and the pandemic has brought to light the disparities in our ability to be food secure in seemingly mundane places. For instance, on the front page of *The New York Times*, there are articles explaining how to make high-brow cuisine using “ordinary” pantry staples: braised white beans in a cream sauce with Pecorino Romano and fresh fennel. In the next column: an article explaining that the order to close New York public schools was delayed out of fear that hundreds of thousands of children would lose access to the only hot meals they receive in a day. And as we collect more data about the disease and how it impacts the body, we see other disparities appear—those with preexisting conditions such as heart disease, high blood pressure, diabetes, and obesity seem particularly vulnerable to the infection, and all of these conditions are often caused by or exacerbated by diet. And those that are least likely to control many of their dietary choices are those that are least able to control many other aspects of their lives—the poor.

The average US family cannot afford a \$400 emergency expense, and the \$1200 stimulus check many individuals will receive is equivalent to the average food retail worker’s minimum wage salary for a month’s full time work. Those on the front lines keeping our country fed—retail workers, farmworkers, delivery drivers—are now being called heroes, sacrificing for the greater good, and that is true. But they may also be hostages—one paycheck away from eviction or getting their utilities shut off, with no option to take paid sick leave or to work from home. While they stock the shelves full of organic rainbow chard and pancetta they may only be able to afford boxed macaroni and cheese and hotdogs for their own family’s dinner. Their jobs have been deemed “essential,” but their paychecks and benefits indicate they are “expendable.”

The pandemic is revealing the fault lines of inequality that are always present. Our society and economy treat labor and the natural environment as equally exploitable commodities, and our food system is no exception. But as we move forward through the uncertainties of the coming weeks and months, we should also look at the glimmers of hope that have begun to reveal themselves as well. Across the US, there has been a renewed interest in planting victory gardens so that households can grow some of their own fresh food. Major suppliers of baby chicks reported record numbers of requests for pullets because of an increased interest in raising backyard laying hens. Local farmers are indicating increased demand for spots in their community supported agriculture programs, as people seek to insulate themselves from potential disruptions in national food systems (and try to reduce their exposure to risk by avoiding the grocery store).

Many of these strategies are not necessarily connected to any real desire to change the status quo, but are knee-jerk reactions by people who are anxious and fearful of what is happening and what’s to come. But this is also an opportunity to connect folks who would not normally stop to consider their place in the food system with more economically, socially, and environmentally sustainable options for getting their food. It is a chance to open a conversation about how we value people, how we rely on the natural environment, and what we could and should do to change the way we interact with both. This Earth Day we may celebrate individually and in isolation, but with the chance to illustrate how we are anything but. Let’s capitalize on the opportunity we have to disrupt the dehumanizing and damaging ways our food system works, and revitalize our collective interest in growing a more sustainable way forward.

# 21 Day Challenge for a More Sustainable You

 <p><b>Do a Plastic Audit</b></p>	 <p><b>Compost Food Scraps</b></p>	 <p><b>Read, Don't Stream</b></p>	 <p><b>Support Your Mental Health</b></p>	 <p><b>Go Plant-based for 1 meal/day this week</b></p>	 <p><b>Fix and DIY- Don't Buy</b></p>	 <p><b>Measure your Carbon Footprint</b></p>
 <p><b>Go Zero-Waste for One Day</b></p>	 <p><b>Plant a Tree</b></p>	 <p><b>Commit to Vote</b></p>	 <p><b>Shop Secondhand</b></p>	 <p><b>Go Plastic Free for One Day</b></p>	 <p><b>Learning about Endangered Species</b></p>	 <p><b>Talk about Climate Change with a Friend</b></p>
 <p><b>Clean-up your Neighborhood</b></p>	 <p><b>Go for a Hike in the Outdoors</b></p>	 <p><b>Learn How to Recycling Properly</b></p>	 <p><b>Take Action!</b></p>	 <p><b>Make a DIY Cleaning Product</b></p>	 <p><b>Switch your CFL bulbs to LED</b></p>	 <p><b>Challenge Someone else!</b></p>

# Old Campus Gardens:

## A local change to make a global impact

**Julie Whitaker: Energy and Sustainability Coordinator**

Modern industrial agriculture systems produce a wide range of negative impacts to the health of the environment and to humans. With increasing farm size, specialized farming techniques, crop monocultures, and the misuse of herbicides and pesticides, this has led agricultural structures to increase their influence on environmental crises around the world. The connection between humans and their food sources has become lost in the ever globalizing world surrounding us.

Valparaiso University does not have a long history of agriculture sciences or farming practices. During the roaring twenties, and up until World War II, gardening and botany were at the center of education and living for the pharmacy and agriculture departments. The pharmacy department broke ground on their first “Drug Garden”, where they tested more than 100 plants bearing the ability to grow in the Great Lakes region for pharmaceutical needs. Male students were granted hands on experience in farming. Collectively, then men took care of eight acres of farm land. Each student kept his own colony to learn about beekeeping, and raised broods of chickens, sheep, hogs, and horses. A community’s livelihood in the early 1990s was dependent on the ability to breed their own animals, and yield their own fruits and vegetables, known as victory gardens. After World War II ended, victory gardens began to vanish, the rise of industrial agriculture began to take hold, and the knowledge and willingness to grow your own food disappeared. Other attempts of community gardens at Valparaiso University’s campus have been attempted, but never quite reached success like the early farming that happened once before on campus.

With the growth of organizations and universities implementing community gardens throughout the world, this connection is being regained and understood to a better degree. Our hunger for learning about our food system has risen and the initiative to incorporate a campus garden will once again be a part of the Valparaiso University campus.



Image 1: Garden Clean Up Day; Valparaiso University Campus, 1925

The implementation of Old Campus Gardens on VU’s campus, brings the past and future of social, environmental, and economical responsibilities of a food system. The Office of Sustainability aims to bring an outdoor place to gather, connect and collaborate on horticulture knowledge and practices. This closed loop system enhances the understanding of our connection to our food and local ecosystem. The campus garden will be a place of reflection, beautification, and education for the university's campus and for the surrounding community.

Old Campus Gardens will be located at 551 Greenwich Street. This area is often called “Old Campus” due to the fact that this location was formally the main campus. The land will be prepared for two types of gardens...*continue to page 14*

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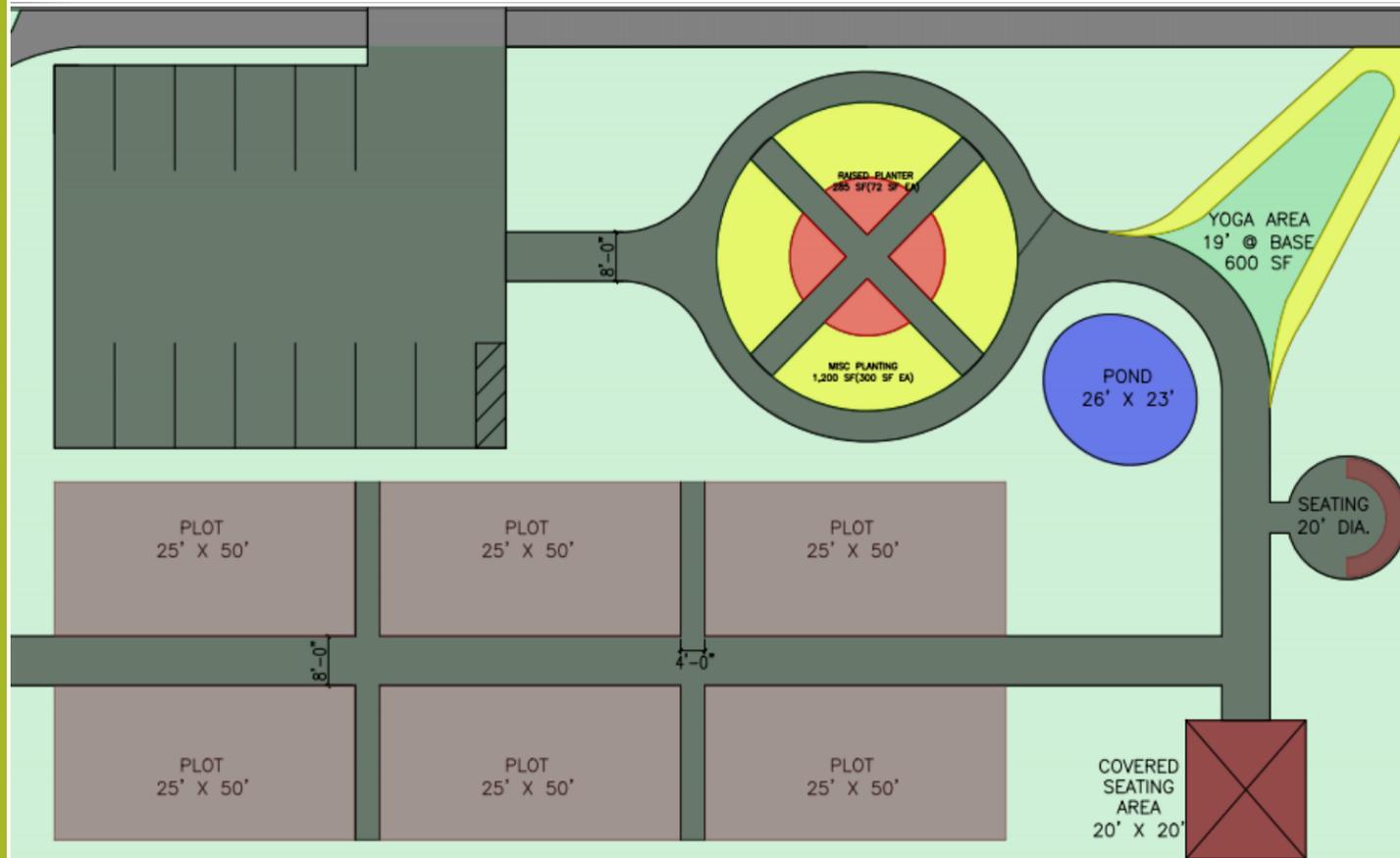


Image 2: Future plans for Old Campus Gardens

1. A campus community garden- Where students, staff, and faculty can purchase a garden plots to grow fruits, vegetables, and flowers.
2. The Healing Medicine Garden- This section is a take on the old methods and theories of the Pharmacy Department's "Drug Garden." The Healing Medicine Garden will take you on a literal walk of healing through plant medicine and relaxation. The trail will educate the community on the health benefits of plants if used medicinally. This green space can be used for educational means and for leisure enjoyment.

Old Campus Gardens is an opportunity for the university members to implement positive health and wellness pursuits and add a space that beautifies and enhances our urban campus. We have a chance to get back to our roots as farmers and independent servants to the environment.

# A Bright Future

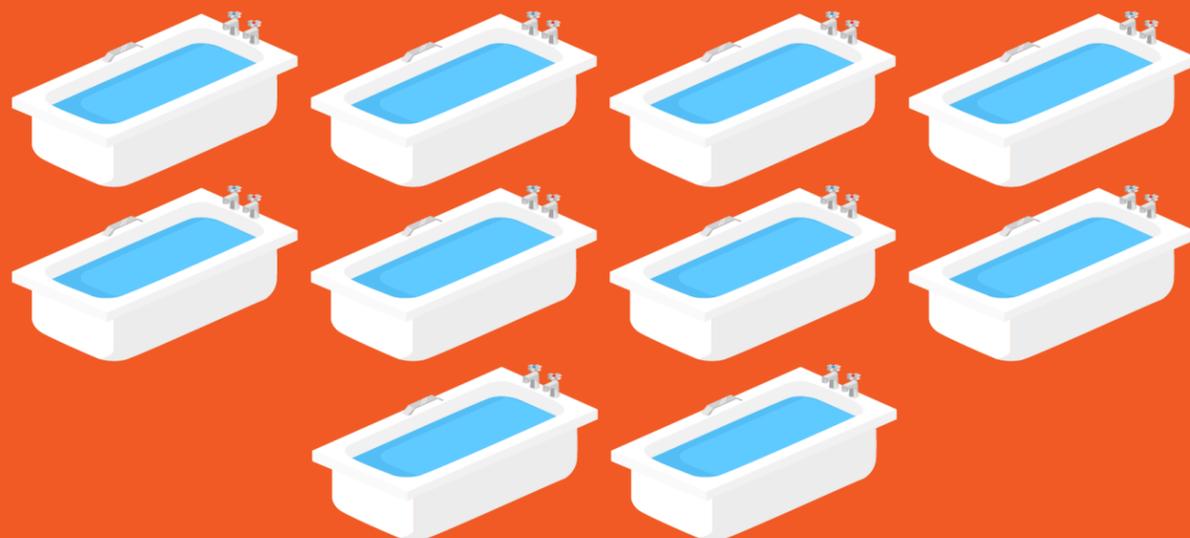
Currently, the Office of Sustainability is in the planning stages of a new solar project. The Karl and Helen Sachtleben Schmidt Solar Energy Fund is predicted to offset the buildings electricity consumption by 19% a year. This will be the second solar install that Valparaiso University campus as seen, with Fites Innovation Center having a 26 kW solar array that was installed in 2013. This donation is a critical step in Valparaiso University sustainability goals by reducing electricity usage and carbon emissions.



**GLOBAL LIVESTOCK PRODUCTION  
CREATES MORE GREENHOUSE  
GAS THAN THE ENTIRE  
TRANSPORTATION SECTOR.**



**PRODUCING A 1/4 LB.  
BURGER USES ENOUGH H<sub>2</sub>O  
TO FILL 10 BATHTUBS.**



## Food for Thought

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Food is quickly becoming one of the most impactful topics to climate change. A plant-rich diet is believed to be one of the easiest ways to reduce personal greenhouse gases and improve ones health.

Interested in getting local produce all summer long?  
Check out these local CSAs and farmers markets!

Rainfield Farm

Crème de la Crop

Native Roots Farm

Valparaiso Farmers Market

Chesterton European Market

# Becoming Environmental Justice Advocates

**Aaron Morrison: Assistant Director for Institute for Leadership and Service**



“This Immersion Trip showed me that the issues that Flint and Detroit are facing are not new things that have come about. These issues such as water quality, air pollution, segregation, miscommunication and so many more have been interwoven into the foundations of these two cities. This only made me realize that all of us need to educate ourselves more on the issues that those around us face on a daily basis and change our perspectives on what progress and growth mean to all those that are affected by it” Sarah Tubbs: Senior Environmental Major

Addressing a global issue like environmental injustice requires collective human action. The harm is immense, which can feel overwhelming. However, hope can be found in the response of local citizens. During this most recent spring break, the Institute for Leadership and Service (ILAS) at Valparaiso University took a group of 19 students and 4 faculty/staff on an Immersion Trip to examine environmental justice and sustainability efforts in Detroit and Flint, Michigan. By experiencing this trip, students learned that through common belief in human dignity and resolute commitment to organizing, change can happen.

This program model calls for a group of students to immerse themselves into the lived stories of people who resist systemic injustice. To participate, students had to apply and be selected by a committee based on their motivations and potential to bring impactful ideas back to campus. Once selected, students took a 1-credit course to prepare themselves with context which better informed their immersion experience. The design of the Immersion Trip is meant to maximize learning impact for students by encouraging ample reflection on where their identity intersects with civic duty.

The group met with a variety of community partners who helped them understand local environmental justice and sustainability efforts. They visited with scientists, museum docents, clergy, engineers, non-profit leaders, and activists. The diversity of speakers allowed for an interdisciplinary lens for students to consider the issues. Some highlights of the week included an environmental justice tour with Detroit community activist Theresa Landrum and community organizer Justin Onwenu. This tour educated attendees to the challenges, triumphs and history of Michigan’s most polluted zip code, which contains dozens of industries dangerously placed among residential neighborhoods.

Another highlight of the week included a visit to the Boggs Center for Nurturing Community Leadership. Founded by legendary local activists Jimmie and Grace Lee Boggs, the Boggs Center took students to several sites of economic and cultural empowerment for oppressed communities in the area. Examples include the Heidelberg Art Project, which is a series of public art works made from recycled industrial materials, and a large network of community gardens that provide fresh produce to people without a local grocery store.

All throughout the week, students would gather in small groups to engage in discussions facilitated by a student leader. Reading about the issues in a classroom context is different than a visceral, first-person encounter. Because of this, these moments provided crucial reflection time for students to process difficult and complex topics they encountered. Ideas for a hopeful future can emerge out when a community comes together to talk about what they have learned.

After a full week on the immersion trip, the participants felt both sobered by the weight of the injustice and inspired to take action where they are now as Valparaiso University students. Environmental injustices continue to impact Detroit and Flint, Michigan as they do here in Northwest Indiana. However, they learned about how these injustices impact our communities firsthand as well as the importance of organizing for policy change. Change will take time, and experiences like the ILAS immersion trip plant seeds for collective power to make those changes.



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