

# Community Development Newsletter

Winter 2016/Spring 2017

## The Power of a Single Snowflake

By Becky Nesbitt, Extension Educator, Community Development

We journeyed north to Alaska for our family vacation this year. And as odd as it might sound, while in that remote, spectacular, unspoiled wilderness, I couldn't help but think about the concept of community.

I see myself as a lifelong student, so when I'm interested in something, I want to learn more about it. As we were traveling past the ice fields and across the Aleutian and Alaska mountain ranges, I was reading about the early explorers who made their way into that part of the world. John Muir, a 19<sup>th</sup> Century author and naturalist, was one of the first non-native souls who trekked into that frozen, unforgiving place.

As Muir hiked over and around the tallest, snow-capped peaks in North America and gazed into the turquoise blue depths of massive glaciers, he marveled at the powerful forces of nature. And in those moments, when the only sounds ringing in his ears may have been humpback whales breaking the surface of the water or the wind whistling through the Western hemlocks, I think he was thinking about community too.

While canoeing near glaciers in what is now Glacier Bay National Park, Muir wrote that he began to think about how those massive bodies of ice were formed from delicate snowflakes. He observed that a single snowflake, on its own, is fragile and powerless; but many snowflakes, gathered together, over time, formed a glacier. And those slow-moving rivers of ice carved mountains, created deep valleys, and gave birth to breathtaking fjords and great fresh water lakes.

As I was reading about his adventures, I thought about how a person, alone in that unfriendly wilderness, was a bit like a snowflake. Individually, of course, a person can have much more impact than one snowflake, but when one person becomes two or three or more, a "community" is born. Helen Keller remarked, "Alone we can do so little; *together* we can do so much." People seem to be at their best when they work together, gathering around a shared goal or living peacefully in a common area. When we live and work together, we must face our similarities and our differences; we must harness our strengths – allowing each person to contribute an individual effort to a combined outcome. Just like those snowflakes within a glacier, each of us can be one part of collective force that might one-day move mountains.

To learn more about OSU Extension's educational programs focused on community development, visit [go.osu.edu/seekexcellence](http://go.osu.edu/seekexcellence).



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## Energy Development Factsheets Available

OSU Extension has collaborated with OSU Ag Econ to provide communities with resources to help better understand how oil and gas development affects the social, economic, and environmental fabrics of a community. A recently published fact sheet series titled, "Shale Energy Development Economic Impact Analysis" is based on the original research from the project "[Maximizing the Gains of Old and New Energy Development for America's Rural Communities](#)." This series summarizes the research into six chronological fact sheets to inform the reader of economic impacts related to energy development.

1. Ohio Energy Trends: Comparing Old and New Energy Development.
2. Characteristics of a Boomtown.
3. Contributing Factors to a Boomtown Bust.
4. Developing a Model to Measure Economic Change in an Energy Economy.
5. Local Economic Development Strategies for Energy Boomtowns.
6. Community Planning Strategies for Energy Boomtowns.

The fact sheet series provides a background of energy development in Ohio, investigates the structural changes to local economies experiencing oil and gas development, and provides planning strategies for community stakeholders to nurture long-term community vitality.

For more information, visit [ohioline.osu.edu](http://ohioline.osu.edu) to review the fact sheet series or contact the Extension office at 740-472-0810.

## How Good Nutrition Can Combat Effects of Lead in Water

**By Martha Filipic, News Team, CFAES**

**Source: Pat Bebo, Leader, Community Nutrition Program, OSU Extension**

Children are especially susceptible to the dangers of ingesting lead from drinking water or any other source, says a registered dietitian nutritionist with Ohio State University Extension. But parents can help limit the health impact by making sure their children eat a well-balanced diet, especially that they get enough calcium, iron and vitamin C.

"The best defense against lead for anyone is a healthy lifestyle," said Pat Bebo, leader of OSU Extension's Community Nutrition Program and interim assistant director in charge of Extension's Family and Consumer Sciences programs. OSU Extension is the outreach arm of The Ohio State University's College of Food, Agricultural, and Environmental Sciences. Bebo also holds an appointment with Ohio State's College of Education and Human Ecology, which partners with CFAES in outreach and research.

"But it's especially important for children, because their digestive system is much more efficient at absorbing lead. Children's bodies may absorb up to 50 percent of the lead they ingest, while adults absorb just 10 to 15 percent.

"Absorption is greatest on an empty stomach. Infants and children up to age 6 are at the greatest risk."

Lead poisoning has been in the news recently after reports of dangerous amounts of lead in public drinking water supplies in Flint, Michigan, and Sebring, Ohio. But lead ingestion can also come from lead paint, particularly from houses built before

## Feed People, Not Landfills

By Amanda Osborne, OSU Extension Educator

How can we improve the environment, save money, and more effectively address food insecurity issues? One approach within the larger sustainability movement involves looking more closely at the issue of food waste.

According to the U.S. EPA, in 2014 more than 38 million tons of food waste was generated, with only 5.1% being diverted from landfills and incinerators through composting efforts. The EPA estimates more food reaches landfills and incinerators than any other single material in our waste streams, accounting for 21.6% of our discarded solid waste.

According to the Natural Resource Defense Council (NRDC), an international environmental advocacy group, “Getting food from the farm to our fork eats up 10 percent of the total U.S. energy budget, uses 50 percent of U.S. land, and swallows 80 percent of all freshwater consumed in the United States.” When we consider the large amount of natural resources used for food production it is troubling that 40% of food in the U.S. goes uneaten. The uneaten food ends up rotting in landfills where it accounts for a large portion of U.S. methane emissions, posing negative effects on the environment. However, food waste is not only an environmental concern, but also a social and economic issue.



The economic effects of food waste are just as startling. Americans throw away the equivalent of \$165 billion worth of food each year. In addition to food waste occurring at the consumer level, 10% of the total food supply at the retail level enters the solid waste stream. The USDA estimates that supermarkets lose \$15 billion annually in unsold fruits and vegetables alone, in addition to the baked goods, meat, seafood, and ready-made foods that go unsold. These items can easily be recovered from the waste stream by donating them to local food banks and food pantries, and retailers can receive tax benefits for doing so.

Aside from economic and environmental benefits of reducing food waste, recovering or diverting edible food from the waste stream could help to address the larger social issue of food insecurity in the U.S. In 2015, 12.7% of U.S. households (15.8 million households) were food insecure (USDA ERS), and 6.6% of households in Ohio were found to have “very low food security,” defined by the USDA as households in which “normal eating patterns of one or more household members were disrupted and food intake was reduced at times during the year because they had insufficient money or other resources for food.” Reducing food losses by just 15% recovers enough food to feed more than 25 million Americans every year, which could have a profound impact when we consider that one in six Americans lacks a secure supply of food.

## How Good Nutrition Can Combat....

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1978, lead dust and lead in contaminated soil. Lead poisoning can cause cognitive delays and behavior problems, and can harm the brain, kidneys and other organs.

Bebo said calcium is the most important nutrient to help combat lead ingestion.

“Picture a cell, any cell in the human body,” Bebo said. “They all have receptors that allow nutrients to enter the cell and do their work. When the right nutrient matches up with a receptor, the cell will let it in.

“It just so happens that calcium and lead compete for the same receptors, but lead is a much better fit. So there must be enough calcium circulating in the body to bind to the cell receptors first. Then the lead is less likely to be absorbed.”

The recommended amount of calcium for children up to 6 months is 200 milligrams a day; 260 milligrams for children 6 to 12 months; 700 milligrams for those 1 to 3 years old; 1,000 milligrams for those 4 to 8 years old; and 1,300 milligrams for those 9 to 18 years old. A cup of milk has about 300 milligrams of calcium. Other good sources are other dairy products such as cheese and yogurt, as well as dark green leafy vegetables and calcium-enriched orange juice.

Getting enough iron is also important, as it can prevent iron-deficiency anemia that can be caused by lead.

“Iron is needed in our red blood cells to absorb oxygen,” Bebo said. “If there’s not enough iron circulating in the body and you’re taking in toxic amounts of lead, then the lead will interfere with the uptake of iron by the red blood cells and as a result you could become anemic.

“If you are getting enough iron in your diet, it will compete with the lead for entry into the red blood cells.”

Infants up to 6 months need just 0.27 milligrams of iron per day, but those 6 to 12 months need 11 milligrams. Children 1-3 years need 7 milligrams; 4-8 years, 10 milligrams, and 9-13 years, 8 milligrams. Boys 14-18 need 11 milligrams a day, and girls that age need 15 milligrams.

Iron-rich foods include iron-fortified breakfast cereals; lean red meat, turkey, chicken and fish; green leafy vegetables; and kidney beans and lentils.

Getting enough vitamin C is also necessary, Bebo said, as it helps the body better absorb iron. Vitamin C-rich foods include citrus fruits, red and other bell peppers, cantaloupe, tomatoes, broccoli, potatoes, sweet potatoes and other fruits and vegetables.

“Basically, what I tell people is to follow MyPlate,” online at [www.choosemyplate.gov](http://www.choosemyplate.gov), Bebo said. “A healthy diet won’t completely eradicate the threat of lead. But it can go a long way, especially in children up to age 6, to limit the level of toxicity.”

It’s important not to rely on supplements to get the recommended amount of these nutrients, Bebo said.

“There’s no evidence that supplements have any better effect than eating a balanced diet, and it’s too easy to go overboard using supplements. That could put you at risk for toxicity as well — you don’t want that, either.”

Getting enough physical activity and hydration is also important, Bebo said, “to make sure the organs can flush the system and to keep a healthy body weight so additional fat mass won’t be available to allow the body to store harmful minerals.”

OSU Extension offers two Community Nutrition programs that allow low-income Ohioans to learn more about how to maintain a healthy diet. The Expanded Food and Nutrition Education Program is offered 20 counties, and Supplemental Nutrition Assistance Program-Education sessions are offered in 80 counties. Anyone interested can contact their OSU Extension county office to find where the nearest program is, or they can find information at [fcs.osu.edu/nutrition](http://fcs.osu.edu/nutrition).

“It doesn’t have to be complicated,” Bebo said. “In fact, it’s simple. But you have to know some basics about good nutrition, and Extension is here to help provide that information.”

Parents can learn more about lead and reducing their children’s exposure to it from the U.S. Environmental Protection Agency at [www.epa.gov/lead](http://www.epa.gov/lead).