A Service of **Cherryland Electric Cooperative**

April 2013

Michigan COUNTRY LINES

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LoAnn Vande Leest

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Michigan's Electric Cooperatives
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On the Cover

Bob Miskowski, also known as "Bluegill Bob," has become a Michigan fishing legend simply by catching bluegills most of his life.

Photo – Robert Gwizdz

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Letters to the editor should be sent to Country Lines, 2859 W. Jolly Rd., Okemos, MI 48864. Phone 517-913-3531. **Email: gknudtson@meca.coop**.

Association officers are **Tony Anderson**, Cherryland, chairman; **Ken Swope**, Midwest Energy, 1st vice chairman; **Robert Schallip,** Cloverland, 2nd vice chairman; **Eric Baker**, Wolverine Power, secretary-treasurer; and **Brian Burns**, PIE&G, past chairman. **Craig Borr** is president and CEO.

Unsolicited letters, photos and manuscripts are welcome. *Country Lines,* however, will not be responsible for their safe keeping or return.

Change of Address: Please notify your electric cooperative. See page 2 for contact information.

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Community Solar Project Set to Shine

I have talked and written about affordability in this column over the years. After much more thought, deliberation and discussion since the first of this year, I believe we have found a way to make the most expensive form of renewable energy affordable.

Tony Anderson
General Manager

Community solar is not a new idea. It is working in varying degrees of success at a handful of other utilities in other states. As far as I can determine, it has not been attempted in Michigan. Cherryland Electric Cooperative (CEC) has invited Traverse City Light and Power (TCLP) to work with us to make it happen for every member and citizen these utilities serve who is willing to participate.

As I write this, we are working hard to formalize concepts into written agreements, and anticipate an April 15 start date. The utilities will retain ownership of the solar panels, parts and pieces.

Individuals will sign a 25-year lease agreement for a one-time fee of $470 per solar panel. We will start with an offering of 48 panels to be built on land next to the CEC headquarters building. If interest exceeds this number, we can easily scale up the solar array to a bigger number in a short time. Other locations around the service territories may be possible if interest warrants.

There will also be energy optimization (EO) rebates available. CEC will be offering an EO rebate of $75 that will drop the member's out-of-pocket cost to $395. Members with qualifying capital credits who wish to take an early discounted payout will be able to drop the price another $75 to $320. If you are interested in your specific options, please call our member services manager, Kevin Cragg, at 486-9200.

Individuals who step forward and commit to a lease (or multiple leases) will receive a monthly bill credit for the actual electricity produced. The vendor, Contractors Building Supply of Copemish, estimates that one solar panel can produce an average of 25 kilowatt hours (kWh) per month. Obviously, production in June will be different from January.

Individuals will receive the prior year's average wholesale power cost, less a very small amount to cover distribution costs and line losses associated with transmitting power from the generator to the final user.

The wholesale power price in this "first of its kind" type of project is currently being calculated in association with our legal team and necessary regulatory bodies. Based on the 25-kilowatt hour-per month estimate, our goal is to achieve a break-even for individuals that is 20 years or less. Capturing all the rebates mentioned above will lower the break-even point much further.

There will be no additional costs to participating members. The utility partnership will cover any maintenance issues. Energy produced after the 25-year period will go to the utilities, as we attempt to recover some costs over the long-term.

If you sign a lease with CEC and move into TCLP service area (or vice versa), we will simply transfer the credit to your new account. If you move outside the service territory of either utility, you will have the ability to sell or assign your lease to another individual or business. If you fail to re-assign the lease, energy production will revert back to the utilities.

Why solar? Why now? The answer is long and has multiple responses. Basically, we have found a mechanism to achieve the fairness and affordability "mantra" so often written about over the years. Thus, we feel this program is the right thing to do for *all* our members. The partnership with TCLP only makes it better by spreading the risk and opening up the program to an even wider audience.

We have more details to work out before April 15. If you are interested, stay tuned for press releases, postings on Facebook and email newsletters. We are simply putting out the news early in hopes of kick-starting the project. Join in the conversation and provide us your feedback so we can make this as successful as possible.

Photos (including cover) – John L. Russell

New First-Class Leader

Northwest Michigan Surgery Center's new CEO leads by example. **Nick Edson**

LoAnn Vande Leest has the heart of a caregiver and the brain of an administrator.

That's why she is a perfect fit as the chief executive office at the Northwest Michigan Surgery Center.

"I went to high school and college in Wisconsin and my last job was in Wisconsin, so I know something about the so-called Midwest friendliness," said LoAnn. "But Traverse City takes it to a new level. People go out of their way to say nice things and to help. I love it here already."

LoAnn is from the small town of Gillett, WI, and graduated from the Bellin College of Nursing in Green Bay. She also has an MBAH from Cardinal Stritch University to cap off her impressive resume.

"My roles are as a wife, mother, nurse and administrator," she said with a friendly smile. "But I've always believed that God puts me where I'm supposed to be, and this is where I'm supposed to be."

Her job, which she started on Jan. 14, is challenging from many different perspectives.

The surgery center, which opened in 2004 and gets its power from Cherryland Electric Cooperative, is the second busiest outpatient surgery center in the U.S.

More than 17,000 patients are treated annually at its location across from Traverse City West Junior High in Copper Ridge. And, the center has been named in Becker's Top 100 places to work in healthcare.

Patients not only receive first-class care, LoAnn said, but are cared for by a first-class staff. "That's why the story of this surgery center is all about our staff," said LoAnn. "A lot of them wear more than one hat, because that's the nature of the work here as compared to a hospital."

LoAnn leads by example.

"I still enjoy putting on my nursing scrubs and getting out to the clinical areas from time to time," she said. "There have been times, since I'm new here, when a doctor will remark he hasn't seen me before and wonder who I am. I just tell him I'm the boss here. We get a good laugh over it."

While LoAnn admits she expects her staff to be accountable for what they do, she also believes that a happy staff is a productive staff.

"Surgery centers are different than hospitals,, but we both have our own jobs to do," she said. "Hospitals are the appropriate place for overnight and long-term care. Surgery centers are for 23-hour, and less, care. They were created to lower costs, which happens when you don't have to keep patients overnight and have all the ancillary services of a hospital. They were created so doctors could get their lives back by having control over their schedules. Surgery centers are a complement to hospitals."

The surgery center works in partnership with Munson Healthcare and was developed by local physicians, in partnership with Munson Medical Center. The complex is 34,000-square-feet and has a staff of 80 physicians, 43 anesthesia providers, and a healthcare staff of over 120 people.

That's a lot of responsibility for LoAnn, but she enjoys it.

"The key to a surgery center is how the clinical staff and the business staff are co-dependent on each other," she said. "In the hospital, the clinical and business areas seldom see each other. Here, they interact closely every day. They understand that each has a job to do, and while they're very different, without either one, the other wouldn't exist."

Besides overseeing the surgery center, LoAnn is a national healthcare surveyor for the Accreditation Association for Ambulatory Healthcare, and travels to other surgery centers around the country to assess their care. This gives her a chance to come back and fine-tune the Michigan center with what she has seen work around the country.

When LoAnn isn't working, she enjoys volunteering and spending time with her husband Mike and their 22-year-old son, Steve.

In the fall, LoAnn and Mike's thoughts turn to football. They have season tickets in the third row at Lambeau Field in Green Bay, home of the Packers.

"My in-laws have had season tickets at Packers games since before Lambeau Field was built, back when it was City Stadium," she said. "We love going to Packers games."

Above all, however, she loves getting involved in volunteer work.

"I have a heart for community work," she said. "Giving back is what it's all about—and it's apparent that the people of Traverse City know that and share in that enthusiasm."

Letters & More

Reader comment, the next tax season, energy efficiency tips, and appliances. It's all here on your Readers' Pages.

We enjoyed reading about our association in your recent article (Feb.) "Shooting Preserves Extend Bird Season." For those in Cass County and surrounding area, you don't have to go far to find a pheasant shooting preserve. Curt Johnson, a director of the Michigan Game Bird Breeders and Hunting Preserve Association, has Rolling Hills Shooting Preserve just outside Marcellus.

– Curt & Paula Johnson, Marcellus, ***Midwest Energy Co-op***

HOW TO SEND A LETTER

Readers are encouraged to submit thoughtful, courteously-worded letters, and we print as many as possible in the space and time allowed.

Country Lines reserves the right to print letters at the publisher's discretion, based on length, space and content, and to edit slightly for space and facts. Please limit comments to 240 words or less. Submit by posting online at countrylines.com, email gknudtson@meca.coop, or mail to: Editor, Country Lines, 2859 W. Jolly Rd., Okemos, MI 48864.

HOW TO CHANGE YOUR MAILING ADDRESS

Contact your electric co-op—they maintain the mailing list. See page 2 for your co-op's contact information.

Plan Ahead for 2013 Tax Season

Congratulations! If you're like most Americans, you recently filed your 2012 federal tax return. Since you've just completed that painstaking process, perhaps the last thing you want to think about right now is your 2013 taxes.

But here's why you should. There have been many changes to federal tax laws, and by doing the right planning today, you can eliminate a potentially unpleasant financial surprise when you file next year.

What You Need To Know

Tax policy was altered on New Year's Day with Congressional passage of the American Taxpayer Relief Act of 2012. While you should consult with your tax adviser for a total list of the revisions, following are some highlights to be aware of. Please note all of these became effective on Jan. 1, 2013 (with some retroactive to 2012).

The deduction for certain types of expenses was extended to include the 2012 and 2013 tax years. This includes deductions for state and local taxes, educator expenses (i.e., the "teacher deduction"), qualified tuitions, and others.

Individual income tax rates that went into effect in 2001 and 2003 became permanent, which means no changes for folks in the 10, 15, 25, 28, 33, and 35 percent tax brackets. However, the rate on taxable income for those earning $400,000 or above (single filers) and $450,000 or more (for those married and filing jointly) has increased to 39.6 percent.

The capital gains tax rate increased from 15 to 20 percent—but only for those with taxable incomes at or above $400,000 (single filers) and $450,000 (for those married and filing jointly). It remains at 15 percent for all others.

The law imposed limits on allowable itemized deductions on 2013 tax returns for individuals with incomes of $250,000 or more ($300,000-plus for married couples filing jointly).

The amount of income exempt from the Alternative Minimum Tax (AMT) has been set for 2012 and will now be indexed for inflation each year, as determined by the Internal Revenue Service.

Any 2013 taxable wages that exceed $200,000 are now subject to a 0.9 percent Medicare tax surcharge. This applies to individuals only, not employers.

The provision providing for a 2 percent reduction in FICA (i.e., Social Security) withholding amounts expired. This resulted in a reversion to the previous 6.2 percent withholding amount.

What You Can Do Now

Check in with your tax adviser to see how the new tax laws affect you and the steps you should take to make sure that you are adequately prepared to file your 2013 taxes. While high-earners are affected the most, your tax professional can help position you more favorably for this current tax year, such as altering your pre-tax retirement plan contributions.

– Doreen Friel

This article is for informational purposes only, and is not intended to be tax advice. Consult a tax adviser for information specific to your situation.

Lightbulbs Die Differently

Don't be fooled; any popping sound or smoke appearing when a CFL lightbulb burns out means that its end-of-life mechanism is working. And, despite confusion caused by an e-mail hoax circulating since April 2010, these sounds signal the bulb is working safely in its final hours. Smoke, a popping noise, and even a slight odor are typical and do not pose a fire risk as claimed in the misleading e-mail.

According to Underwriters Laboratories, Inc. (UL®), an independent nonprofit firm that tests and sets standards for electrical items, about 130-150 million CFLs are sold each year in the U.S. While the bulbs produce 75 percent less heat than incandescent bulbs, differences between them go deeper than the amount of heat released. As the first wave of CFLs begins reaching the end of their lifespan, consumers are learning the bulbs die differently, too.

Most folks know traditional bulbs tend to burn out the same way: a pop, a flash, and, when shaken, the familiar rattle confirming the bulb needs to be changed. Sometimes the plastic at the base of a CFL will turn black, which is normal in most cases as safety standards require application of special flame-retardant plastics.

"CFLs are one of the products we regularly test to specific requirements for electrical safety, fire, and shock hazards," says John Drengenberg, UL consumer affairs manager.

Look for the UL mark when buying CFLs, which means the product was investigated to specific safety requirements. For more information, visit SafetyAtHome.com.

How to Buy an Energy-Efficient Appliance

Some new appliances feature the Energy Star® logo, which means that the appliance is significantly more energy efficient than the average comparable model. For an energy-smart deal on your next appliance, consider the following information:

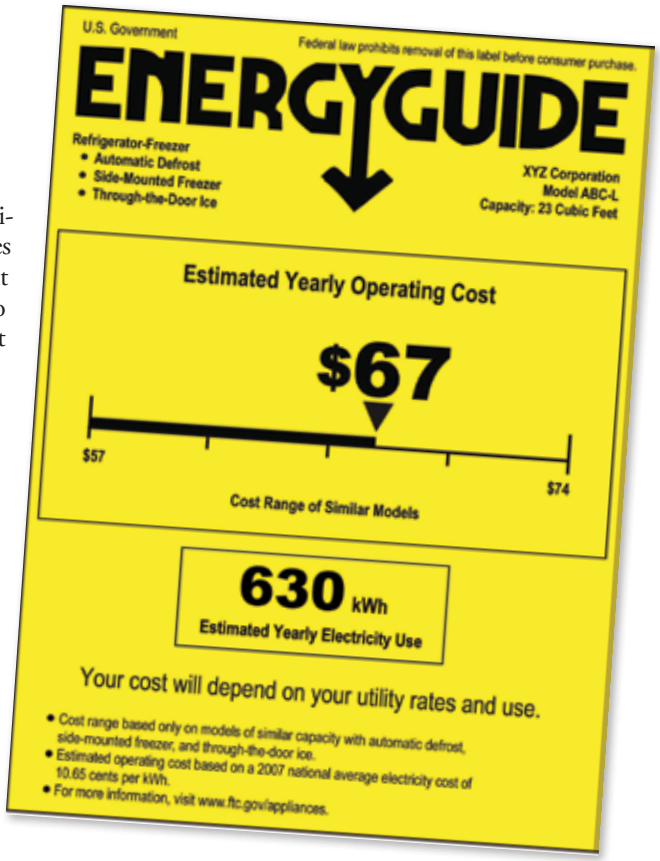
- Read the EnergyGuide label (required for refrigerators, freezers, dishwashers, clothes washers, water heaters, and select HVAC systems).
- Compare the energy use of competing models.
- Estimate their differences in energy costs.
- Consider both purchase price and estimated energy use when deciding which brand and model to buy.

Shopping Strategy

Select the size and style. Measure the space the appliance will occupy to be sure your new purchase will fit. Make sure that you'll have enough room to open the door or lid fully and enough clearance for ventilation. This may help you narrow your choices as you settle on the best capacity and style.

Know where to shop. Appliance outlets, electronics stores and local retailers carry different brands and models. Dealers also sell appliances through print catalogs and the internet.

Compare the performance of different brands and models. Ask to see the manufacturer's product literature. Decide which features are important to you. Ask questions about how the different models operate: Are they noisy? What safety features do they have? What about repair histories? How much water do they use? How energy efficient are they?



Estimate how much the appliance will cost to operate. The more energy an appliance uses, the more it will cost to run. Consult the EnergyGuide label to compare the energy use of different models. The difference on your monthly electric bill can be significant, especially when considered over the 10-to-20-year life of the appliance. You could save money over the long run by choosing a model that's more energy efficient, even if the purchase price is higher.

Try visiting TogetherWeSave.com to compare how updating appliances and making other changes around your home can impact your electric bill.

Ask about special energy efficiency offers. Ask your salesperson or local electric cooperative about cash rebates, low-interest loans, or other incentive programs in your area for energy-efficient product purchases—and how you can qualify.

– Source: Federal Trade Commission

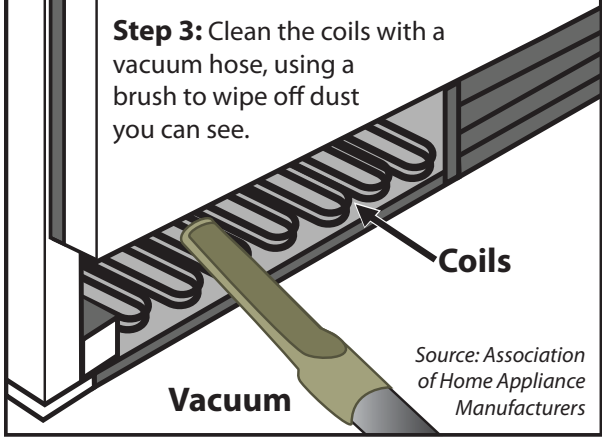
Clean Cold Coils

Vacuum your refrigerator coils every three months to eliminate dirt buildup that reduces efficiency and creates fire hazards. To clean condenser coils:

Step 1: Unplug the refrigerator.

Step 2: Pull off or unscrew the vent plate that protects the coils.

Step 3: Clean the coils with a vacuum hose, using a brush to wipe off dust you can see.



Source: Association of Home Appliance Manufacturers

Energy Efficiency Tip of the Month

Keep energy efficiency in mind as the ground thaws and you plan spring landscaping. Properly selected and planted trees, shrubs, and bushes can create a windbreak that lowers home heating bills in the winter and insulates your home year-round. Before you start, check on the right plants and techniques for your climate at EnergySavers.gov.

Source: U.S. Department of Energy

LochenHeath Is Bouncing Back

At first glance, the rolling grounds of LochenHeath appear serene overlooking East Grand Traverse Bay. Luxurious homes sit near the Scottish Highland-style golf course on what was the Maitland family's cherry orchard for over 75 years. Life at LochenHeath, however, hasn't always been so peaceful.

LochenHeath was developed by the Maitlands in 1999. An Arizona development company purchased the project in 2004, realizing the amazing potential. The beautiful grounds were plotted to support over 400 high-end homes. The restaurant was run by one of the area's best chefs, Joseph George. By 2007, nine families called LochenHeath home.

It was at that point when LochenHeath hit a bump in the road, as the real estate bubble burst and the developer abandoned the project. Soon after, homeowners discovered that the sanitary and central fresh water systems were in disrepair and needed maintenance.

When the homeowners association inquired, they were notified that the systems were soon to be shut off by Cherryland Electric Cooperative for non-payment. When they contacted the developer, they were told that the developers were under no legal obligation to maintain the property.

After more research, it was revealed that the current homeowners would have to take responsibility for the cost of the common well and sanitation system if these services were to continue. The homeowners banned together and took control of their association through a court order. This allowed them to maintain the infrastructure and keep LochenHeath operational as a viable community.

The golf course, an integral component to LochenHeath's success, was also closed and its 30 employees dismissed with two days' notice. In 2010, a group of 11 investors, who were homeowners and previous club members, formed a corporation called LochenVest LLC, and began the process of buying the golf course, restaurant and pro shop.

As a result of all these events, a new relationship was born between the local homeowners, the golf course, and Cherryland Electric Cooperative. When the homeowners began receiving very large electric bills for their fresh water and septic systems, they contacted Cherryland.

Upon inspection, it was discovered that a pump was broken on the well and required repair to stop the continuous energy use and sky-high electric bills. Cherryland also worked with the golf course to reduce costs by efficiently monitoring water usage during off-peak times. The co-op also recommended low energy lighting and thermostats, which greatly reduced energy use and costs.

In the summer of 2008, LochenHeath Golf Course was operated by the Grand Traverse Resort. After that season, the course was left unattended by the developer, so it was closed and the greens stood empty during the summers of 2009 and 2010… almost. Some homeowners and other former club members volunteered their time to pick weeds from the bunkers and mow the grass. These volunteers kept the course alive while negotiations were underway to acquire it, according to Al Ruggirello of LochenVest.

In December 2010, LochenVest bought and re-opened the golf course, pro shop and restaurant, allowing public play. After hearing of LochenHeath's rebirth, Chef George contacted LochenVest. "I told him we were just starting out," Ruggirello recalls, "Our restaurant would just serve sandwiches and burgers." Chef George replied, "Then LochenHeath will have the best burgers in town…I don't want anyone else in my kitchen.'"

LochenHeath has been reborn as a welcoming community of casual elegance with a friendly, small-town attitude. The updated course design uncovers panoramic views of Grand Traverse Bay. And Chef George's kitchen creates unique meals using local ingredients, including a burger that comes highly recommended by this writer.

What's in the future for LochenHeath as we approach another golf season? Well, the golf club will soon go private, but there's still time to check out the golf and the home sites as summer comes rolling in.

Kim Crockett is a member service representative at Cherryland Electric Cooperative.

Co-op News

Next Member Input Session Is June

The board of directors at Cherryland Electric Cooperative is offering another opportunity for members to provide direct input to the board. Members will be able to talk to the board next on Monday, June 17, at 9 a.m. at the co-op office in Grawn.

Members are asked to come to the lobby and request to speak to the board. Members are asked to keep their comments to 5 minutes. Member attendance at the board meeting is allowed for the public input portion of the meeting only.

Cherryland members are afforded a chance to meet with the board on a quarterly basis during meetings in March, June, September and December.

Check Us Out On Facebook

For the latest Cherryland news and events, members can now follow us on Facebook.

Click "Follow us on Facebook" at the bottom left-hand corner of cherrylandelectric.com.

75 Years: The Impact of Electricity

Later this month, after three years of interviews and document digging, our 75th anniversary book called "Lighting the Way" will appear in bookstores and be available for sale here at Cherryland.


Nick Edson

We priced the hardcover book at a very reasonable $10 because we wanted it to be affordable and read by as many of our members as possible.

Why? We are proud of our story and the men and women who—against great odds—were able to bring power to rural northern Michigan.

It's the story of our co-op on the local level and how co-ops nationwide brought light to the dark countrysides of our nation.

In fact, during a recent trip to North Carolina to visit our grandsons, I noticed something I had never thought about before. I looked at the power lines running up and down the sides of mountains and wondered how the pioneering co-op workers did it.

When I interviewed some early Cherryland employees who worked here during the 1940s and '50s about how workers pulled off such accomplishments, they just smiled.

"Well, if you've ever tried to read by the light of a candle or haul water in the house to take a bath, you'd understand how we got it done," several of them said.

Since many of the first co-op members were farmers, electricity also meant they had light in their barns and power to use electric milking machines.

Not only that, but when people were burning old kerosene lanterns in their homes, it was dirty and required the constant washing of curtains and blankets.

"People never think about it today, but one of the big differences when electricity came to our farm was how clean it was," said one Cherryland member. "Not only could we get more done in the evenings, but we didn't have to spend as much time cleaning. When people say electricity changed their lives, they weren't kidding. There were a lot of reasons it did."

Several of the older people I interviewed recalled two huge advantages of electricity.

"Number one was having appliances like a refrigerator to keep our ice and stoves to cook our meals," they said. "Number two—and we mean this quite literally—was having flush toilets."

I have to admit I almost fell off my seat laughing at the last remark.

But the real difference that electricity makes can been seen in the eyes of people who didn't have it decades ago. They don't take it for granted like we do, since we grew up with it and are used to having it.

Frankly, I can't imagine a time without electricity. So my appreciation is more for TV and computers, which have come into their own since I was born in 1953.

But for the Greatest Generation, the folks who grew up in the 1920s, '30s and '40s, electricity was life-changing.

"It's the greatest invention of my lifetime," several long-time Cherryland members told me.

"What's second?" I asked one elderly woman.

She was silent for several moments.

"I'd have to give that more thought," she said.

But actually, her answer told me everything about the impact of electricity in our lives.

Co-op News

Annual Meeting Set for June 6th

Cherryland Electric Cooperative's 75th Annual Meeting will be held Thursday, June 6, at Wuerfel Park.

The Traverse City Beach Bums of the independent Frontier League, play their home games at Wuerfel Park, which gets its power from Cherryland.

Registration runs from 3-5 p.m. on June 6, with the business meeting from 5-6 p.m. The Beach Bums game starts at 7:05 p.m.

Cherryland members will receive a free ticket to the game and a food voucher, which entitles them to a hot dog, chips and soft drink.

More meeting details will be in upcoming issues of *Country Lines*.

Co-op Members Can Benefit At Sam's Club

Cherryland Electric Co-op has just negotiated a benefit for all its members with the Traverse City Sam's Club.

If you open a new membership or renew an existing one, you can receive up to a $25 gift card. This offer is valid only through June 30. Information about this offer may be picked up at Cherryland's office in Grawn, at Sam's Club, or online at cherrylandelectric.com.

Please bring proof of your Cherryland Electric Cooperative affiliation (membership card or current bill) to Sam's Club and sign up soon!

Cherryland Cares Offers Grant Applications

Area nonprofit agencies who are seeking financial help can apply for a grant through Cherryland Cares.

Cherryland Cares is a five-member board, made up of Cherryland Electric Co-op members who distribute money from Operation Round Up to area nonprofits. The next quarterly meeting of Cherryland Cares is Monday, June 17. The deadline for applications is Friday, June 7.

Operation Round Up money comes from Cherryland members who elect to round up their bills to the nearest dollar every month. This amount averages $6 per year.

To receive a Cherryland Cares grant application or join Operation Round Up, call Nick Edson at 486-9222 or email him at nicke@cecelec.com.

Pay Your Bill Online

It's easy to do. You can set up your accounts to get only an e-mail bill—no more paper bills.

To sign up, access your account on cherrylandelectric.com. It will prompt you immediately after you sign in to decide whether or not you want the paper bill to continue; if you do, check the box. If not, simply press "update."

Questions can be answered by Cherryland's Member Service Department at 486-9200.

Bluegill Bob

There are a lot of ways to make a name for yourself as an angler: catching record fish, winning fishing tournaments, designing productive lures, even writing about the experience.

But Bob Miskowski didn't do it any of those ways. Miskowski became one of Michigan's legendary anglers simply by catching fish.

A 70-year-old retired maintenance man who lives in rural Lenawee County, Miskowski is known statewide by the "Bluegill Bob" moniker that he was given by a Department of Natural Resources fisheries biologist over 20 years ago. And though he's carried the nickname around for so long, he's still surprised when another angler pulls up to him on the lake and asks: "Are you Bluegill Bob?"

Miskowski says his first recollections of fishing are as a 6-year-old accompanying his father on the ice. His predilection for piscatorial pursuits is in his genes, he says.

> ***"You can always catch bluegills. You may not catch a lot of them, but you always catch some—always."***

"My father taught me everything I know," he says, proudly. "He was a heckuva fisherman, and so were his brothers."

Truth is, Miskowski started picking up tips from other anglers, fishing magazines, and even developed a different style of fishing than the rest of his family while he was still in single digits. He has refined his style over the years, until he established his reputation as one of the best bluegill fishermen anywhere.

First, he said, he started using simple flies instead of the standard hooks and worms used among panfish anglers. Instead of a bobber, he uses a heavier plastic practice plug, which, while still floating, allows him to cast much further distances than a lightweight bobber. As a result, it covers more water and presents his bait to more fish. While the heavier float doesn't submerge like a light cork when a fish bites, he just watches for any unusual motion and then sets the hook.

Although he's spent plenty of time fishing for everything from suckers to salmon, Miskowski seems to always gravitate back to bluegills.

"You can always catch bluegills," he explains. "You may not catch a lot of them, but you always catch some—always. With bass or pike or walleye, you can fish all day long sometimes and get skunked, but with bluegills, that just doesn't happen.

"They're fun to catch, too. They fight as well as any fish in the lake. And they're good eating—ask anybody."

Miskowski begins the season as soon as the ice is off the lake. He concentrates on shallow, dark-bottomed backwaters—often canals off the main lake—where the water warms up fastest. He starts with just the bobber and an unweighted fly, which sinks slowly in the cold water. If it's not working, he adds a tiny bit of bait—usually a spike (fly larva) or wax worm (bee moth larva). As the season progresses and the fish move a little deeper, he adds some lead wire to the chenille body of his hand-tied flies so they'll sink faster and get down to the strike zone more quickly.

Miskowski maintains this same presentation until the bluegills go on the beds, then, when the sunfish become more aggressive, switches from insect larva to red worms—the bait he'll stay with all summer until the water begins to cool again in the fall.

Once ice fishing season arrives, Miskowski is really in his element. He's designed his own lightweight combination seat-and-gear box that has become known as a "Bobby Box," in which he carries a lantern for keeping his hands warm. Miskowski dislikes ice shanties or shelters—"I want to be out on the ice and be able to pick up and go and where I can move around," he says. That's a big part of his strategy; he begins the day by drilling a number of holes and rarely spends more than a couple of fishless minutes at one before he moves on.

It's a fairly rare day that Miskowski doesn't bring back his limit of fish for the fryer. It used to be a rare day that he didn't fish, too, though he admits that as the aches and pains of advancing age make their presence known, he's down to fishing three or four days a week now—anytime the water is open or the ice isn't unsafe.

"I used to fish every day, and sometimes twice a day, except on Sunday," adds Miskowski, a deeply religious Christian, who signs off on the telephone with "God bless."

"On Sunday," he says, "I go to church."

Bob Gwizdz is an avid outdoor writer featured in many hunting and fishing publications.

Co-ops *Are* Different

What makes electric cooperatives different from other types of utilities lies in their core mission.

Photo – iStockphoto.com

Michigan Country Lines magazine comes to you because you are a member and owner of the local electric "cooperative" that provides the power to your home or business. That's why you'll often see references to "the cooperative difference" in these pages. The differences between electric co-ops and other electric utilities range from how they refer to the people they serve—co-ops serve "members" or "member-owners" not "customers"—to the business model itself.

For example, electric co-ops operate on a not-for-profit basis. Revenues above operating costs, called "margins," are returned to members in the form of capital credits in years when the co-op has profit above the actual cost of providing service and maintenance of the system for future reliability.

In the U.S., there are two other kinds of not-for-profit electric providers: public utility districts (PUDs) and public power districts (PPDs). There are also two other types of electric utilities: city-owned municipal electric systems and profit-driven investor-owned utilities. In every case, utilities receive financial assistance from the federal government in some fashion. Following is a look at each.

Co-ops, PUDs, PPDs

Electric co-ops are joined by public power districts—located exclusively in Nebraska—and public utility districts (all in the Pacific Northwest) as being not-for-profit. But while co-ops choose directors/trustees from their membership (people served by the co-op) and are required by state law to hold annual membership meetings, PUDs and PPDs are local government units—similar to school districts—and are not required to hold annual meetings or allocate capital credits. In addition, their directors (commissioners in the case of PUDs) are elected on the state ballot. Candidates only need to reside within the PPD/PUD's boundaries to serve on a board; they do not have to receive power from the utility.

Federal assistance to electric co-ops comes in the form of low-interest loans from the Rural Utilities Service (RUS), formerly the Rural Electrification Administration (REA). Based on current interest rates, RUS loans actually make money for the federal government—about $274 million in fiscal year 2012. Aside from aiding in the construction of critical infrastructure that keeps electric service reliable and electric rates affordable, RUS financing remains important because household incomes in co-op service territories run about 11 percent lower than the national average.

Co-ops also have fewer consumers to share the cost of providing electricity. Co-ops serve an average of 7.4 consumers per mile of line, over which they collect annual revenue of about $14,900. Nationally, electric co-ops pay $1.4 billion in state and local taxes each year.

Municipal Electric Systems

Municipal systems are electric distribution utilities owned by a city, borough or other incorporated community. As public entities, they can levy taxes, issue government bonds, and adopt and enforce rules and regulations.

Not-for-profit municipals serve the most consumers per mile of line, an average of 48, and collect an average of $113,301 per mile of line. The federal government subsidies municipals, too—when cities or boroughs issue tax-exempt bonds, interest paid to bond owners is not taxed. The cost of this benefit in 2003 (the last year data is available) was $909 million, or $55 per consumer.

Investor-owned Utilities

Investor-owned utilities (IOUs) are governed by and generate profits for shareholders (stock owners) who do not necessarily live in the utility's service area. IOUs average 34 customers and $75,498 in revenue per mile of line.

In almost every case, IOUs charge electric rates that include amounts for presumed federal tax liabilities. However, available tax breaks (investment tax credits and accelerated depreciation) allow IOUs to retain most of the taxes collected, a total of about $107 billion to date. At a cost to the government of $4.6 billion in 2010, this federal subsidy to IOUs equals about $44 per customer.

Back to the Co-op Difference

Your local electric co-op exists to provide affordable, reliable, environmentally responsible electric power. But at the core, it's really about improving the quality of life in the communities it serves. That's the main difference—the cooperative difference.

Keep reading *Country Lines* to see how electric co-ops make a difference in their communities.

Magen Howard writes on consumer and cooperative affairs for the National Rural Electric Cooperative Association, the Arlington, Va.-based service organization for the nation's 900-plus consumer-owned, not-for-profit electric cooperatives.

Batteries *ARE* Included

Electric co-ops are testing energy storage systems to better harness renewable energy.

One of the main obstacles to widespread use of wind and solar power production is nature itself: The wind doesn't always blow, and the sun doesn't always shine. But electric co-ops are on the cusp of efforts to develop technology aimed at storing excess renewable energy for when it's needed most.

Battery storage systems were developed in the 1970s and have become more viable on a large scale, thanks to recent chemistry breakthroughs that increase the longevity while lowering the cost of batteries. If battery energy storage at the utility level can be made commercially viable, it could result in a revolution for the aging American electric grid.

Wind and solar energy are called "intermittent" power sources—meaning they don't provide a steady supply of electricity like traditional generation fuels, such as coal or natural gas. Even in the best situations, the wind blows an average of only about 30 to 40 percent of the time and usually not during hot, humid weekday afternoons or extremely cold mornings when electricity use spikes. Meanwhile, solar energy production can dramatically drop even when a band of fluffy clouds briefly passes over the sun.

That's where battery energy storage comes in. For example, this technology can store electricity produced when the wind blows at night and the sun shines for use during times of "peak demand"—the electric utility industry's version of rush-hour traffic, when power use skyrockets—to avoid buying expensive supplemental power.

So far, a handful of electric co-ops across the country are testing various ways to use these batteries.

Harnessing Energy Saves Money

Battery storage systems are a big investment for any electric co-op, but the good news is that benefits exist beyond leveling out renewable energy supply.

"Properly managed battery storage systems can delay the need for building expensive transmission lines that are difficult to get permits for in the first place," says Dale Bradshaw, a senior program manager with the Cooperative Research Network (CRN), the research and development arm of the National Rural Electric Cooperative Association (NRECA). "It also reduces wear-and-tear on baseload power plants, which operate year-round to provide dependable electricity at a low cost, and can make electric distribution systems run more efficiently. All these opportunities add up to cost savings for consumers."

This technology can store electricity produced when the wind blows at night and the sun shines for use during times of "peak demand"—the electric utility industry's version of rush-hour traffic.

At present, pumped-storage hydro—a hydroelectric plant that generates power by using water previously pumped to an elevated reservoir during off-peak hours, when electricity is less expensive—remains the largest-capacity form of energy storage available. Another option, compressed-air energy storage—power plants "fueled" by air pushed into an underground cavern during times of low electricity consumption—has received increased attention because it can be expanded relatively cheaply. PowerSouth Energy Cooperative, a generation and transmission co-op based in Andalusia, AL, operates one of only a few compressed-air energy storage facilities in the United States.

"Pumped-storage hydro and compressed-air energy storage facilities generally operate when electric use soars," mentions John Holt, former NRECA senior manager of generation and fuels. "But geography limits where they can be located."

This means development of better batteries could be the key to wide use of energy storage technologies.

Before central station electric service came to rural America via the electric cooperative movement in the 1930s, farmers used "battery sets" that were recharged with windmills and ram pumps. In this situation, the ram is often useful—especially for pumping water uphill—because it is self-powered. A ram pump requires no outside

power source other than the gravity from flowing water. Like conventional, sealed lead-acid car batteries, those contraptions could go only through a limited number of discharge/charge cycles before they were exhausted.

Fast-forward to 2013, and developers are aiming for batteries that can function through 80 percent discharge for 10,000 cycles—allowing for longevity of three decades or more.

"If you're supplementing wind or solar, you're going through a complete cycle on a daily basis," Bradshaw notes. "In other words, a long-cycle life remains key."

What Energy Storage Means for the Future

The U.S. Department of Energy forecasts that energy storage will significantly change the electric grid. With it, the nation could possibly create an electricity "stockpile" like the Strategic Petroleum Reserve. But initially, energy storage systems will make renewable generation sources more financially feasible—a critical step as U.S. lawmakers contemplate ways to create a more diverse energy production portfolio.

"Co-ops could also use battery storage systems to cut down on blinks—those momentary service interruptions that force you to reset your digital clocks," Bradshaw notes. "If enough energy is stored, power could continue to flow to homes during such an event."

He concludes: "Electric co-ops are leading the charge in researching and testing energy storage systems that will directly benefit consumers—from reduced operational costs and better service reliability to environmentally responsible power production."

Magen Howard writes on consumer and cooperative affairs for the National Rural Electric Cooperative Association, the Arlington, Va.-based service organization for the nation's 900-plus consumer-owned, nonprofit electric cooperatives.

Challenges of 'Greening the Future'

Your home's electricity comes from one of two sources: fossil fuels and renewables. Electric co-ops, public power districts, and public utility districts balance these resources to deliver safe, reliable, affordable power.

Most electricity gets produced by burning fossil fuels, which emit greenhouse gases like carbon dioxide (blamed as a climate change contributor) or nuclear reactors that emit clean water vapor (steam) but create high-level radioactive waste. Fossil fuels—primarily coal and natural gas—are non-renewable, with limited stockpiles. Nuclear energy, fueled by uranium, also relies on a finite resource.

Photo-John Thornton/NREL 09933

A combination of solar array and battery energy storage is another intriguing option that could help restore service to consumers more quickly by serving as limited power for a few hours. Paired with some type of distributed generation (such as a solar array), a battery backup, and enhancements to existing demand response systems (these offer incentives to consumers to reduce electricity use), limited power could potentially be extended to consumers indefinitely, even when the sun is not shining.

Renewable energy like water, wind, sun, biomass, the earth's heat, and hydrokinetic (uses flowing water to make energy) sources like tides and ocean waves replenish themselves. And when it comes to generating renewable electricity for rural America, electric co-ops are leading the way. Electric co-ops receive 13 percent of their power requirements from renewable resources compared to 10 percent for electric utilities as a whole.

Renewable energy has its share of challenges, however. "Green" power resources don't exist everywhere or in sufficient quantity to "keep the lights on all the time." There's also a need for more transmission lines to move renewable power from the places where it's generated to population centers, and for new technology capable of storing electricity produced by variable wind and solar facilities as a way to make them more reliable forms of generation.

The North American Electric Reliability Corporation (NERC), which oversees reliable operation of the bulk power grid covering the United States, most of Canada, and a sliver of Mexico, estimates 39,000 miles of transmission lines need to be built by 2019, with 27 percent dedicated to connecting renewable resources to the grid. Yet, getting these lines constructed poses major regulatory and community challenges. Already, NERC claims that almost 6,500 miles of planned transmission lines are delayed, with the typical delay lasting up to three years.

Meanwhile, the U.S. Energy Information Administration's (EIA) 2012 Energy Outlook (see 2013 Annual Energy Outlook Preview at eia.doe.gov/forecasts/aeo/early_elecgen.cfm) forecasts the share of generation coming from renewables (including hydro) will grow from 13 percent in 2011 to 16 percent in 2040—mainly in the form of wind. But less than 25 percent of this renewable capacity will be available when consumers need it most, notably during times of peak demand, highlighting the need for research into developing advanced energy storage options (see p. 10 story).

It's also important to note EIA's prediction for renewables growth is in response to federal tax credits, state-level mandates, and requirements to use more biomass-based transportation fuels.

Electric co-ops are working closely with others to remind Congress to keep the affordability of electric bills in mind when debating energy legislation. A sound approach to renewable energy remains an important element for consideration.

– Angela Perez

Other sources: NRECA, Electric Power Research Institute

Grow Your Own

Michigan grapes are not just for juice and jam anymore!

Photo – Tabor Hill Winery. Jeff Greenberg

The number of wineries in Michigan is growing, and so is the variety of grapes offered for home gardeners to grow their own.

There's never been a better time to grow grapes in Michigan, even in the chilly U.P. Thanks to U.S. and European breeders, there are many options for growing a delicious variety of grapes for fresh fruit, juice or wine-making.

Grapes are a big deal along our Lake Michigan coast, and increasingly in all corners of the state. Most of the 15,000 acres grown here are for juice, jams and jelly. However, wine grape production has literally exploded over the last 10 years, says Duke Elsner, small fruit specialist at MSU Extension.

"Michigan now has over 100 wineries, compared to about 10 years ago, when there was 25," Elsner says. "We're not just a casual producer of wine anymore."

The wine quality is "fantastic," he adds, owing in part to the many grape varieties now available to growers. Varieties coming from the University of Minnesota are especially notable, he says, including Frontenac, which is hardy for wine-making. Riesling is currently the most-planted variety here, and pinot and chardonnay are also used.

Buying & Planting Grapes

When buying grape plants, avoid those in cardboard boxes sitting for who-knows-how-long on a discount store shelf. These could easily be stressed from the heat and drying-out occurring in some stores.

Your grapes should be planted in full sun, on level or sloping ground. (The ideal location is east of a large body of water, but of course not all of us have this option.) Fortunately, there are many hardy varieties like the juice and jelly "Beta" grapes that have been growing on my property for several years.

Grapes are also adaptable to different soil types, he says, but generally do best in loose, sandy loam. Amend clay or sandy soils with organic matter, and a soil test can reveal what's needed to bring the pH in balance and beef up the nutrients. Visit MSU Extension online at msue.msu.edu/ or call 517-355-2308 for more details on soil testing.

Grapes are normally planted from year-old vines, in front of a sturdy trellis or fence. I use the Four Arm Kniffen System to trellis grapes, but there are others, including the Hudson River Umbrella system.

To build a trellis, sink cedar posts, treated 4x4s, or metal stakes at least 2 feet into the ground. Space the posts 6 to 8 feet apart for a single planting. Use a #9 wire for the top wire, and #12 for the bottom. Fasten the bottom wire 30 inches from the ground, and the top one 30 inches from the bottom wire. Fasten the wire in a way that allows you to tighten it later.

Each vine will need to be trained up the trellis vertically the first year. By year two, there will be "arms" that must be trained along the wire. Select four of the thickest arms to train along the wires (two per wire; a total of four arms). Each arm should have eight to 10 buds, and will be about 2 feet long. Select four more canes as close to the arms as possible and cut them back to about 6 inches, leaving only two buds. These are called renewal canes and will produce fruit the following year. Remember this setup, as you will need to repeat it each year when you prune in late winter or early spring. Pruning this way may seem drastic, but it's necessary to ensure a healthy harvest.

Protect and Fertilize

To keep the grapes producing to their potential, fertilize each spring with a 10-10-10 or organic fertilizer, and mulch around the base of the canes to control weeds. Shallow cultivation (no more than 2 inches) is recommended.

Elsner, who is an entomologist by training, says grapes can go a number of years without disease and insect problems, especially if not planted close to wild grapes. He suggests buying hybrid varieties with stated disease resistance, and watching for pests like the dreaded Japanese beetle and rose chafer.

The biggest threat to grapes appears to be song birds, Elsner adds. Netting may be needed to keep them from eating your grapes. If deer are a problem in your area, especially during the establishment phase, protective mesh or a cage may also be needed.

Grapes won't take up much of your time, with the exception of the annual pruning and watching for critters. They're also pretty easy to propagate from stem cuttings, and will produce much sooner than most fruit trees (two years vs. four or five). Finally, you won't need a ladder to pick and enjoy them.

Resources:

Grape Varieties/Uses	**Hardiness Zone**
Frontenac/Wine	3-7
Niagara/Wine	5-8
Concord/Juice/Jelly	4-8
Beta/Juice & Jelly	3-8
Marquette/Wine	4-8
Summerset (seedless)/Table	4-8

Sources for grape vines:

Miller Nurseries - millernurseries.com
Jung Seeds & Plants - jungseed.com

Source for grape vines & grapes:

Michigan Wines - michiganwines.com

Neil Moran gardens in the U.P. and writes about it at northcountrygardening.blogspot.com.

Visit Dave Kober's Wooden Fish Gallery (8 miles south of Cadillac on M -115), his website is koberdecoys.com, or call him at 231-388-4170.

Fish Carver Extraordinaire!

Photo– Koberdecoys©

Where most people see a cedar fence post, Dave Kober sees a trout. Or a perch. Or maybe even a turtle or a frog.

Kober carves fish decoys—both working decoys that fishermen use when spearing through the ice, and decorative decoys that exist purely for their aesthetics. And though he turns them out from a small workshop behind his home near Cadillac, his decoys are on display across the world.

"It's grandpa's fault," explains Kober, 74-years-young and a carver since he was a lad. "My grandfather was an ardent hunter and fisherman and he liked to carve decoys. I started it as a hobby."

Kober, who grew up on a farm in Ottawa County, has been carving professionally since before he retired from a 30-year career in environmental clean up in 1989. And though he never had any formal training, the talent comes from his genes.

"That artsy thing kind of runs in our family," Kober adds. "I have a brother and sister who are commercial artists, though I never pursued anything artsy. When I was a kid it was the furthest thing from my mind. But I could always draw."

That's where his decoy designs start. When Kober begins, he sketches out the design on a chunk of wood, cuts out the rough form with a band saw, and then gets after it with a draw plane and rasp. He finishes it with power tools and hand paints it with acrylics.

Kober works with white cedar, most of which he scavenges from nearby wood lots, though it isn't unusual, he said, to come home and find a cedar limb on his porch, left there by one of his buddies.

"I like the texture of it," he says. "And the smell of it. It's pleasant to work with and it takes paint well.

Photo– Dendra Best/deertracks.com

"I really like that old worn cedar, like fence posts. If it's got flaws in it that just adds to the character of the piece."

Over his career, Kober has carved thousands of pieces, including all the fish that are common to the Great Lakes area, as well as some saltwater species. He often works from a photo sent by an angler who wants a replica of his trophy.

"I send quite a bit of stuff to Alaska—I like to carve grayling and I do halibut, and Dolly Varden [trout], too, so I do quite a bit for customers up there."

But Kober says he has no favorite species.

"Our state fish is a brook trout, and I probably carve as many brook trout as anything I do, but in this area up here, all of these streams are full of brook and brown trout, and they're popular. And walleyes and muskies are popular up here, too."

Though he's never advertised—aside from a sign by the road at his house on M-115—Kober has been commissioned to create original pieces for display. His largest piece ever, a 13-foot sturgeon, is on display in Minnesota. A 10-foot muskie he carved graces Da Dawg House Restaurant in Cadillac.

Kober has gained wide notoriety for his work over the years. Mort Neff of Michigan Outdoors television was an early patron. A display of his process—from a hunk of wood to a finished decoy—is featured at the Department of Natural Resources' Carl T. Johnson Hunting and Fishing Center in Cadillac. He was also featured in a large spread by *Michigan Natural Resources Magazine* in 1992, and he does a lot of work for Bass Pro Shops by carving trophies and retirement gifts.

But Kober has no plans to retire himself.

"As long as my old bones still work, I'm going to keep doing it," he says.

Kober invites anyone who passes his shop near Cadillac to drop in and have a gander.

"Half the time I forget to turn my sign on," he says. "But if my pickup's in the yard, come on in."

▶ ***Thanks to Brian Hoekema***, a Great Lakes Energy Co-op member from Marion, for submitting Dave Kober's decoys as his "favorite Michigan-Made product." Hoekema said Kober "individually handcrafts each carving with great care and attention. His work can be seen in many places of business, such as Cabela's, as well as many restaurants."

▶ ***To tell us about your favorite Michigan-Made product***, please send a few short paragraphs describing the product and why you like it, along with your email and phone number to gknudtson@meca.coop or call 517-913-3531. Also, please let us know which electric co-op provides your service.

Musician Helps Kids Who Stutter

Early intervention is the key to helping prevent stuttering and speech problems.

For many people, springtime brings hope and joyful anticipation. But for those who struggle with stuttering, the old fears of speaking and being teased are the same in every season.

For children who stutter, a typical school day can be fraught with embarrassing situations.

"Any sort of oral reports or speeches were especially difficult for me," recalls John Warstler, a speech therapist for the Cheboygan-Otsego-Presque Isle Educational Service District and member of Great Lakes Energy Cooperative. Warstler received speech services throughout his childhood to address a variety of speech disorders, including stuttering. He remembers being relieved when teachers skipped over him for oral reading, even though it caused some embarrassment. He also avoided classes that required public speaking, such as foreign language. "I felt that I had enough difficulties with speaking English," he says, "so why bother with Spanish?"

Fortunately for Warstler, school was also a place that offered help and support. He received free speech services from kindergarten through third grade, and his stuttering disorder received targeted attention during middle school. That's when an astute science teacher referred him to the six-week Summer Remedial Speech and Hearing Clinic at Central Michigan University.

"The CMU Clinic was my first real experience working directly on my stuttering and it really helped my attitude towards my stuttering," Warstler explains. "I was desensitized to many speaking situations that once were very difficult for me."

It wasn't until his college years that Warstler became a fluent speaker. But even today, he says his fluency can never be taken for granted, because stuttering can be cyclical and episodic.

"I have learned the tools and I possess the knowledge to be a fluent speaker the majority of the time," he adds. "However, I am comfortable with who I am and how I speak for the most part."

Warstler has also devoted much of his life to helping Michigan public school students improve their speech and language skills. Today, he is officially retired, but due to a critical shortage in the field of speech/language pathology, he continues working in public schools two days per week.

Experts say parents should seek help as early as preschool age when their child begins to stutter. Warstler agrees, and reminds parents that all speech/language services are free within public schools. In fact, children are eligible for services whether they attend public, private or charter schools, and even if they are home-schooled. "The earlier the intervention, the greater the likelihood that a child will not develop into a stutterer," Warstler says.

John Warstler is an experienced speech therapist and musician.

He recommends parents check out the many resources offered by the Stuttering Foundation of America (see below, left) for preventing or reducing stuttering disorders and learn about related myths and realities. For example, nervousness, anxiety and shyness do not cause stuttering—it's a myth that needs dispelling, since stutterers have the same range of personality traits as those who don't stutter. The reality is that no one knows the exact causes, but research shows that genetics, neuromuscular development, and a child's environment, including family dynamics, all play a role. Showing acceptance of the child, just as he is, is especially important, Warstler emphasizes, and credits his family for building his confidence and supporting his life-long music endeavors.

Today, besides a sucessful career in speech therapy, Warstler is an accomplished guitarist with two recorded CDs, and a third on the way. He also plays nearly every day in the schools where he works.

"Playing guitar put me in a comfort zone and it was very therapeutic," Warstler explains. "I would say today that music, like my stuttering, is a big part of who I am."

7 Tips for Parents *(or any caring adult)*

1. Speak with your child in an unhurried way, pausing frequently. Wait a few seconds after your child finishes speaking before you begin. Your own slow, relaxed speech will be far more effective than criticism or advice.

2. Reduce the number of questions you ask. Instead, simply comment on what your child has said.

3. Pay attention to your child's message. Use facial expressions and other body language to show you are listening to what your child says, not how he is talking.

4. Set aside a few minutes daily to give your child undivided attention. This quiet, calm time is a confidence-builder for younger children.

5. Help all family members learn to take turns talking and listening. Children, especially those who stutter, find it much easier to talk when there are few interruptions.

6. Observe the way you interact. Increase the times that give your child the message that you are listening and he has plenty of time to talk.

7. Above all, convey that you accept your child as he is. The most powerful force is your support, whether your child stutters or not!

RESOURCES:

- The Stuttering Foundation offers a free brochure, "If You Think Your Child Is Stuttering," at 800-992-9392 or **stutteringhelp.org**
- John Warstler can be contacted through his website at **hymnsonguitar.com**
- CMU Summer Remedial Speech and Hearing Clinic: Contact the Carls Center at (989) 774-3904 or visit **cmich.edu**

Holy Bat Cave!

This is the only one in Michigan's Lower Peninsula.

It's not the typical bat cave the Caped Crusader would hang out in—in fact it's not a cave at all—but northern Michigan bats don't seem to care. Up to 20,000 bats hibernate every winter in the cavernous insides of the Tippy Dam spillway.

When Tippy Dam was completed in 1918 it included four large spillway gates, an unusual design that no other Consumers Energy dam system has.

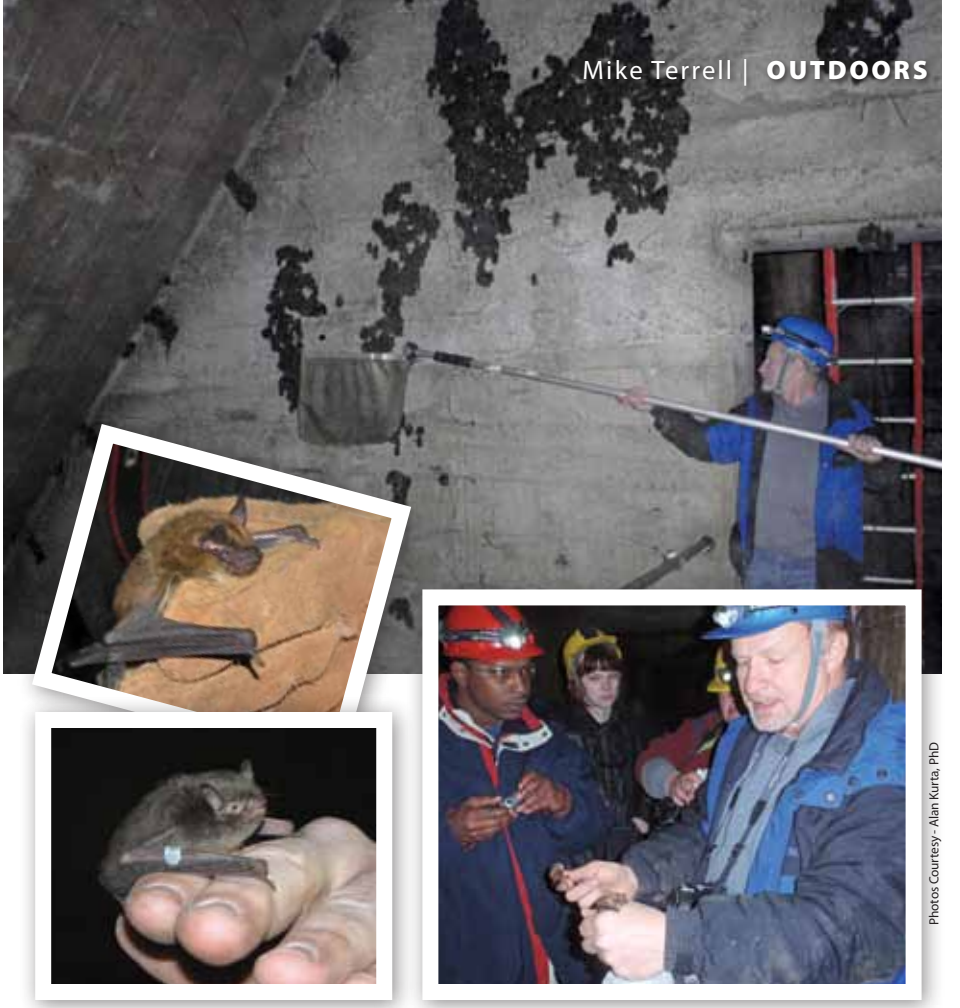
"The design created large hollow chambers within the dam structure, and the chambers remain within a few degrees of the water temperature held behind it, just above freezing," says Lorren Hannah, Consumers' Manistee River hydro supervisor, during a tour. "It's very much like a natural cave."

"The stability of the Manistee River watershed—dominated by sandy, water-absorbing soil—has made it necessary to spill water through the chambers only once in nearly 100 years and that was during summer," he explains.

Apparently it didn't take the bats long to discover that. Routinely 16,000 to 20,000 bats hibernate in the chambers during the winter months. Although bat use was documented for decades by Consumer employees, nobody paid much attention until the 1990s when the company enlisted the aid of Allen Kurta, PhD. An Eastern Michigan University biology professor, Kurta is known for his work with bat species, particularly the endangered Indiana bat.

For the past 19 years, Kurt and his students have made pilgrimages every few years to study and catalog the Tippy Dam bats during hibernation, and again in the fall when the bats are still actively gathering for hibernation.

"The first time I saw this I was amazed at the number of bats that hibernate in here. The population has remained very stable over the last 18 years," Kurta reports. "What I've been most amazed about over the years is finding a few Indiana bats and Eastern pipistrelle bats among the population."



Photos Courtesy - Alan Kurta, PhD

Bat expert Allen Kurta (in blue helmet), a biology professor at Eastern Michigan University, and a group of students check on hibernating bats in the Tippy Dam Spillway in Manistee County. Kurta and his students put bands on (lower left) some of the bats to help gather information for study. Visit michigandnr.com to learn more about the state's Tippy Dam Recreation Area.

Eastern pipistrelles are common throughout northern Mexico and most of the United States, but typically not in northern Michigan. They hadn't been found north of Berrien County before, and the same was thought of the Indiana bat. "A few of those bat species are finding there way north to hibernate, which might indicate climate change," Kurta adds.

Kurta and his students handle the hibernating bats carefully to make sure they do not become active and use up excess fat reserves stored for winter hibernation.

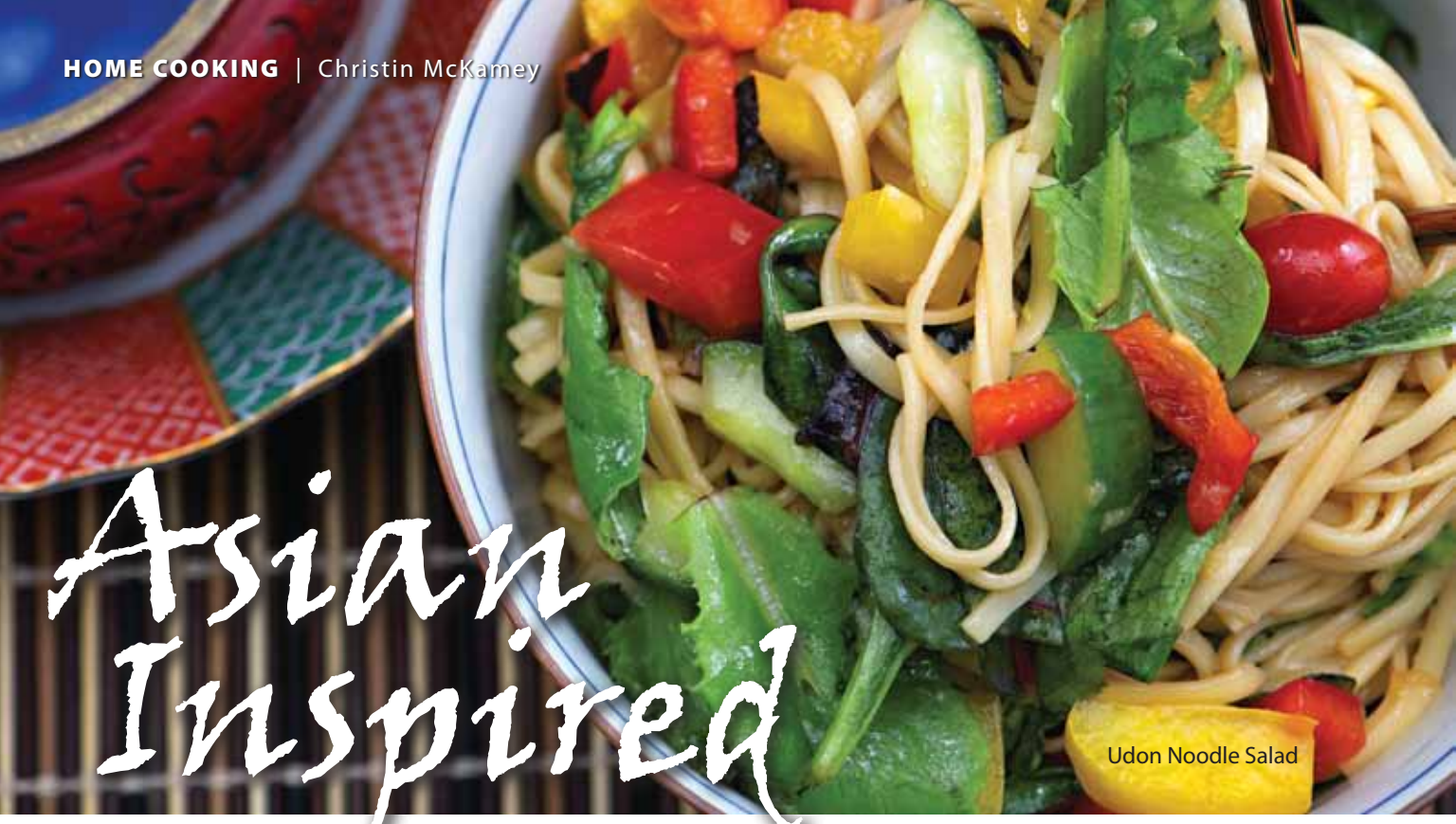
"We handle them quickly to reserve their fat and energy. Normally, they will quickly go back into a hibernation state once we leave," he assures. "It won't be a problem for them."

Consumers Energy is also on-board to minimize contact with the bats during their hibernation state, Hannah says.

"We enter the spillway chamber only when necessary during the winter months, which isn't often," he stresses. This policy also extends to the property around Tippy Dam that Consumers Energy owns. Many local bats, like the brown and northern, spend their summers roosting in trees around the pond. Consumers energy prohibits tree cutting on its property around the dam from May to October—the time when the bats return to the cave-like spillways.

On his last visit, Kurta says the bat population looked healthy and appeared to be stable. Many of the bats they catalog were banded during previous visits. One of the Indiana bats was banded in 1996, and of the 18,000 or so bats wintering here, probably less than 30 are the endangered species, but it's like looking for a needle in a haystack.

Bats will live about 20 years and return yearly to the same hibernation spot unless they are interrupted for some reason, Kurta says. They are incredibly helpful to the people and the environment, he adds, as they devour insects at an incredible rate. One small brown bat can eat up to 3,000 mosquitoes in a single summer night, and they help pollinate a variety of flowers and transport many plant seeds.



Asian Inspired

Udon Noodle Salad

Explore distant lands from the comfort of your dinner table! These diverse and wholesome recipes bring out the unique flavors of Asia and will definitely awaken your senses.

Dark Jim (Korean Chicken Stew)

2½ to 3 lbs. chicken, cut up
1 T. rice wine
1 t. soy sauce
2 t. corn starch
1/4 c. flour
2 T. cooking oil
Sauce:
1/3 c. soy sauce
1 T. rice wine
3 T. sugar
1 t. sesame oil
2 slices ginger root
1 clove garlic
1/8 t. pepper
1/4 c. chicken stock
1 medium carrot
1 medium potato
1 medium onion

Sprinkle chicken with combined rice wine, soy sauce, and corn starch. Mix well. Let stand for 5 minutes, then coat with flour. Heat cooking oil in frying pan and brown chicken on both sides. Combine sauce ingredients and vegetables; mix well.

Place chicken in a large pot and put sauce over chicken. Cook over high heat until sauce comes to a boil. Turn heat down to low and cover; cook for 30 to 40 minutes. Serves 8.

Doreen S. Lawrence, St. Clair Shores

Udon Noodle Salad

4 c. spring mix salad greens
2 bundles udon (or buckwheat) noodles, cooked per package instructions
1 small (or 1/2 med.) English cucumber, seeded, quartered and sliced
1 orange pepper, seeded and diced
1 yellow pepper, seeded and diced
2 roma (or 1 c. grape) tomatoes, diced
1-2 avocados, cleaned and diced (prepare just before dressing to avoid turning brown)
Dressing:
2 T. soy sauce
2/3 T. wasabi paste
1 T. hoisin sauce
2 T. lemon juice
2 T. apple cider vinegar
3 T. sugar
1 T. minced garlic
4 T. olive oil
2 T. sesame oil

Mix together all salad ingredients. Whisk together dressing ingredients. Top salad with dressing. Serves 2-4.

Hazel Holly, Sylvan Lake
(from friend Yuh Suhn Kim)

Photography by: 831 Creative

Chinese Cabbage Salad

6 T. butter
2 packages ramen noodles, broken (save seasoning for another recipe or soup)
1/2 c. sesame seeds
1 c. sliced almonds
1 Chinese (napa) cabbage, chilled and chopped
5 green onions, sliced
Dressing:
1 c. sugar
1/2 c. balsamic vinegar
2 T. soy sauce

Brown the butter, ramen noodles, sesame seeds and almonds in a large skillet, stirring constantly and watching closely. Combine all ingredients in a large bowl, not more than 15 minutes before serving.

Janice Harvey, Charlevoix

Chicken Chop Suey for Two

1½ c. white jasmine rice
2 T. olive oil
2 boneless chicken breasts, cut into cubes
1 t. fresh ground pepper
1 celery stalk, chopped
6 fresh mushrooms, sliced
1 15.5-oz. can bean sprouts with juice
1 3-oz. can water chestnuts, drained
1 10.5-oz. can Campbell's® Beef Consummé

3 T. soy sauce
2 T. cornstarch

Add rice to 3 cups boiling water; cover, reduce heat to low and let simmer 20 to 25 minutes (or use rice cooker). While rice is cooking, heat olive oil in a deep frying pan over medium heat.

Add chicken cubes, sprinkle with pepper; brown and fully cook. Add celery and mushrooms and sauté until celery becomes al dente. Add bean sprouts with juice and water chestnuts.

Heat, stirring often, then add beef consommé and soy sauce and simmer 3 to 4 minutes until it starts to boil; reduce heat to low.

To thicken, add cornstarch to a mug and scoop a ladle of juice into it and stir with a fork until smooth. Pour half of the mixture back into the Chop Suey, stirring constantly. Let simmer a few seconds and the sauce will thicken as it warms. Slowly add more of the cornstarch mixture until you reach a desired consistency.

Serve with rice. Garnish with chopped green onion or ground cashews, or both. Kids love to top this with fried rice noodles.

Mary Gorshe, Suttons Bay

Coconut Rice

1 c. uncooked rice
3/4 c. water
3/4 c. coconut milk
1 T. butter

Combine rice, water, coconut milk, and butter in a large pot. Bring to boil, reduce heat and cover. Simmer for 20 minutes, remove from heat and let stand for 10 minutes. To cook in rice cooker (recommended), put all ingredients in rice cooker and push button to cook.

Christin McKamey, Royal Oak

Spiced Cauliflower

1 head cauliflower, cut into florets
2 medium tomatoes, chopped
1 medium onion, chopped
2-4 garlic cloves, chopped
1 jalapeno, seeded and chopped
1 T. turmeric
2 T. coconut or sunflower oil
1 14-oz. can coconut milk
1 c. water
1 t. sugar
salt to taste

Grind the onion, garlic, jalapeno and turmeric in food processor until it forms a paste. Heat oil in large frying pan; add onion mixture and stir, cooking several minutes; do not brown. Add cauliflower florets and stir to coat in the spices. Stir in coconut milk and water and simmer for 5 minutes. Stir in sugar and salt to taste. Stir in chopped tomato and simmer 2 to 3 minutes more.

Taste to check for seasonings and serve. *Variation*: Stir in cooked, cubed sweet potato and sprinkle with roasted cashews. Serves 4.

Margie Guyot, Ellsworth

Cantonese Dinner

1½ lbs. pork steak, 1/2-inch thick, cut into strips
2 T. oil
1 large onion, sliced
1 small green pepper, cut into strips
1 4-oz. can mushrooms, drained
1 8-oz. can tomato sauce
3 T. brown sugar
1½ T. vinegar
1½ T. salt
2 T. worcestershire or soy sauce

Brown pork strips in oil in skillet to remove excess fat. Drain on double paper towels. Place pork strips and all the remaining ingredients into a crock pot. Cover and cook on low 6 to 8 hours. Serve over hot, fluffy rice. Serves 4.

Mary Lauhoff, Cheboygan

Asian Barbecued Chicken

3 lbs. chicken wings
2 cloves garlic, finely chopped
1/4 c. hoisin sauce
3 t. light soy sauce
3 t. honey
2 T. tomato sauce or sweet chili sauce
1 t. sesame oil
2 spring onions, finely sliced

To make marinade, mix garlic, hoisin, soy, honey, tomato sauce, sesame oil and spring onions. Put chicken wings in a shallow non-metallic dish. Add the marinade, cover and leave in fridge for at least 2 hours. Cook the chicken on a hot, lightly oiled BBQ grill, turning once, for 20 to 25 minutes, or until cooked and golden brown. Baste with the marinade during cooking. Heat any remaining marinade in a pan until boiling and serve as a sauce. Serves 6.

Lorraine Green, South Boardman

Sausage Egg Rolls

1 lb. Italian sausage
1 T. oil, plus more for frying
1 lb. shredded coleslaw mix (or shredded cabbage)
1 bag of bean sprouts
1 onion, chopped
1 t. minced ginger
1 package egg roll wrappers
hot pepper jam or sweet & sour sauce (optional)

Cook sausage, drain and crumble; set aside. Heat oil in pan. Add coleslaw, bean sprouts, onion and ginger. Cook for about 3 minutes, until just tender, but not too soft. Add sausage and mix. Fill egg roll wrappers with 1 tablespoon of sausage mixture, roll up and moisten flap to seal. In large pan with heated oil, cook egg rolls until brown, rotating often. Serve with hot pepper jam or sweet and sour sauce.

Jennifer Sylvester, Sand Lake

Korean Salad

2 10-oz. bags fresh spinach, large stalks removed
1 7-oz. can sliced water chestnuts, drained
3 hard-cooked eggs, sliced
1 8-oz. can bean sprouts, drained (or 2 c. fresh sprouts)
1 medium red onion, thinly sliced
1/2 lb. bacon, cooked crisp and crumbled

Dressing:

1 c. salad oil
1/4 c. cider vinegar
1/3 c. ketchup
1/3 c. sugar
2 T. salt, or to taste
1 T. worcestershire sauce

In a large bowl, combine salad ingredients except for bacon. Chill until serving time. In jar, combine dressing ingredients and shake well. To serve, add dressing and bacon to salad and toss to mix. Serves 10.

Marilyn Willis, Sandusky


Chinese Cabbage Salad

Submit your recipe! Contributors whose recipes we print in 2013 will be entered in a drawing to win a prize: *Country Lines* will pay their January 2014 electric bill (up to $200)! The 2013 winner will be announced in the Jan. 2014 issue.

Thanks to all who send in recipes! Please send in **"Under The Sea"** recipes by **May 10**, and **"No-Cook Meal"** recipes by **June 10**.

Mail to: Country Lines Recipes, 2859 W. Jolly Rd., Okemos, MI 48864; or email recipes@countrylines.com.

Help a kid.

One Call *231-486-9214*

or

One Click *marathon4kids.com*

helps

One Kid *Big Brothers Big Sisters of Northwestern Michigan*

WHAT IS IT? Marathon 4 Kids is a fundraiser developed by Cherryland General Manager Tony Anderson to raise money for Big Brothers Big Sisters of Northwestern Michigan.

HOW DOES IT WORK? Tony's goal is to complete 50 marathons, one in each state. So far, he has run marathons in 20 states.

WHERE DOES THE MONEY GO? 100 percent of the money goes towards serving kids in northwest Michigan through Big Brothers Big Sisters.

MORE INFORMATION? Contact Tony at 231-486-9214 or marathon4kids@gmail.com, or visit marathon4kids.com.

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'Fighting Back'

T.C. Schools Tackle Bullying

Photo – iStockphoto.com

Growing up I was neither a bully nor the victim of incessant bullying. I was, however, a witness to bullying. Many of us have had front row seats to the ongoing bullying problem in our schools.

As much as 25 percent of U.S. school children are victims of bullying every year. These children hold center stage in the continuing proliferation of childhood bullying.

Sadly, 30 percent of all child suicides can be directly related to bullying. Children who are the victims of bullying are more likely to have low self-esteem, depression and anxiety disorders, posttraumatic stress, eating disorders, and other long-lasting harmful effects in their adult years.

The negative effects of bullying are not limited to its victims. Rather, bullying hurts the culture of our schools and communities. When those of us in the front row don't take a stand on bullying we become complicit in a system that fails to protect the victims of bullying.

That's why Cherryland Electric Cooperative is excited to partner with Conflict Resolution Services and TCAPS (Traverse City Area Public Schools) as they implement a system-wide anti-bullying program.

The Olweus (ol-VEY-us) Bullying Prevention Program (OBPP) is the most researched and best-known bullying prevention program available today. It has been used internationally for over 40 years with proven success at reducing bullying.

The OBPP program is not a curriculum; it is a whole-school, systems-change program that aims to:

- Reduce existing bullying problems among students;
- Prevent the development of new bullying problems;
- Achieve better peer relations at school.

According to Sharon Dionne, Blair Elementary School Principal, "the Olweus program is a proactive effort to prevent problems rather than waiting for them to develop."

"When there is a structured program that is consistent at every school, our schools become places where everyone is valued and everyone is treated with respect," Dionne says.

The program will kick-off in fall 2013 with weekly classroom meetings to discuss bullying and establish school rules.

Each school will invite community members to be part of their coordinating committee. The committee will be a team of eight to 15 members that help to start and oversee the school's OBP program.

We have all been the perpetrator, victim or witness to bullying in some way. Therefore, we all have a role to play in combatting it, and the OBPP gives us the chance to create a culture of respect in our schools and communities.

"This sends a message to students that bullying is not just a school issue; it is a community issue."

This means the staff training at Traverse City schools has to begin now, says Elizabeth Pine at Conflict Resolution Services.

The sponsorships from Cherryland Electric and other community organizations help to cover training costs before the program starts and 18 months of follow-up consultation for staff members.

"Strong community support for programs like the OBPP sends a message to students that bullying is not just a school issue; it is a community issue," Pine explains. Conflict Resolution Services is still soliciting sponsorships for the program's training phase.

The schools also need more than just monetary support from the community.

Cherryland Electric Cooperative is proud to support Blair Elementary School and TCAPS as they work to educate another generation of healthy, productive citizens.

See beyondbullyingmi.org for more details.

Rachel Johnson is the Grassroots Advocate at Cherryland Electric Cooperative.

Photos – Rick Wetherbee

Mulch enriches the beauty and health of your plants and landscape, as seen with this path of bark mulch through an herb garden.

Mulch Makes the Garden

Are you looking for a simple one-step process to keep weeds from the garden, increase beneficial critters, fertilize plants, conserve soil moisture, improve its texture, moderate soil temperature, and prevent compaction and erosion? Mulch is the answer!

Most any material that you spread or lay on top of the soil is called mulch. Organics include compost, aged manure, straw, shredded leaves, grass clippings, bark chips, nut hulls, pine needles, and even wool batting. As these materials decompose, they improve the soil's fertility and condition. Inorganics—such as plastic, landscape fabric and small rocks—work similarly but do not add organic material to the soil and can be hard to remove.

What Makes a Good Mulch?

The ideal type of mulch allows water and air into the soil, resists compaction, is odor-free and attractive, and stays where you put it.

Deciding which one to use, however, depends mostly on availability, ease of application, and appearance. Rocks and 100-pound straw bales are heavy to move; black plastic tears and shreds, and straw may not beautify your perennial bed. Yet, in the right setting, each is an excellent mulch.

Many gardening shops and farming centers sell straw (be sure it was cut before going to seed), wood chips, and aged sawdust. They may even have crushed hulls from nuts such as filberts, peanuts and walnuts, or cocoa bean hulls that faintly fill the after-rain air with the aroma of chocolate. Free mulches include shredded leaves, pine needles, compost, tree trimmings or dry, unsprayed grass clippings.

Mulch examples above are (L-R) bark, pebbles, straw, coco bean hulls, rocks and peat.

Place mulch by hand to protect new plantings, and keep a "mulch-free zone" around plants, trees, and shrubs.

Right Mulch, Time & Place

Any mulch's effectiveness depends on when and where it's used. Late winter or early spring applications prevent most weed seeds from even germinating. Mulching in late spring to early summer cools the soil and conserves moisture on hot days. Late fall applications keep soil temperatures warmer through winter, protecting roses, evergreens, trees, shrubs, and any bare ground. Remember that organic mulch applied in any season adds nutrients to the soil, and therefore feeds plants.

Around vegetables, plastic helps prevent weeds and retain moisture. A black or colored plastic mulch also raises soil temperature for heat-seeking fruits and veggies such as tomatoes, peppers and eggplants. However, plastic mulch is typically not permeable to water or air, and it cracks or tears easily.

Landscape fabric lets water and air through while still preventing weeds, which is ideal around trees and shrubs, as well as between beds or on pathways. This durable fabric is often used as a base, then topped with a thin layer of more attractive mulch, such as wood chips. Together, these provide more protection against weeds than either one alone.

How to Apply Mulch

Whether you rake it, dump it, or spread it with your hands, the right way to mulch depends on the area and plants. In smaller beds, avoid damaging existing plants by using your hands.

Keep a "mulch-free zone" around plants, trees and shrubs: about a 1- to 2-inch space for plants, 4- to 8-inch circle around shrubs, and a 12- to 36-inch circle for trees. The finer and denser the mulch, the less you need. Maintain a 2- to 3-inch thick layer for fine-textured materials such as sawdust, shredded leaves and compost. Use 4 to 5 inches for coarser materials like wood chips and straw. Organic varieties will eventually decompose, so apply additional mulch to maintain the right depth.

No matter how you mulch, the benefits go beyond soil and plants. Organic mulch also provides food, shelter and hibernating sites for birds, caterpillars and butterflies. A mulched landscape is also more attractive and unifies the scenery. It's amazing how a one-step process can be so simple to do, yet so significant to a beneficial, beautiful and thriving landscape.

Source – Aprilaire

Keep Indoor Air Healthy

Q: *I want the best air for my family. Which type of central air cleaner is best, and will installing one make my heating and cooling more efficient?*

A: Indoor air quality is becoming a greater issue as homes become more airtight for energy efficiency. And with all the synthetic products used in homes today, indoor air is often more polluted and hazardous to your health than outdoor air.

Installing a high-quality central air cleaner or filter in the furnace/air conditioner duct system does not technically improve the efficiency of your heating and cooling system. What it will do is keep the units running at their highest original efficiency levels. Most air cleaners use little or no electricity to operate.

With a lower-quality air cleaner, such as the standard 1-inch-thick fiberglass filter, dust and dirt can build up on the heat exchanger and cooling coil surfaces. This dust creates a layer of insulation so that heat is not transferred as effectively as it should be, and reduces overall energy efficiency.

If you don't change the filter often enough, dirt can clog the filter and reduce air flow through it. This further reduces efficiency because the heating and cooling coils and heat exchangers are designed for a specific air-flow rate.

In the past few years, manufacturers have begun producing new, super-efficient central air cleaners. They use a combination of electronic air-charging and filters to trap almost all of the tiniest air particles. They can even catch flu viruses and bacteria as they pass through the duct system.

Standard electronic air cleaners use wires to give air particles a negative charge. A collection cell has plates with a positive charge so the negatively charged particles stick to it. When the collection cell is dirty, you can wash it in the dishwasher or bathtub and slip it back into the unit.

For many, the standard type is adequate, but for people with allergies to smaller indoor air particles, the newer electronic air cleaners with a charged filter may be more effective. The electricity cost to operate either type of air cleaner is not significant.

It's important to regularly clean the collection cell of the standard electronic air cleaner to keep it operating at maximum performance and reduce the amount of ozone generated. When the cell gets dirty, the charge can arch from the wires to the collection plate and produce excessive concentrations of ozone gas, to which some people are sensitive. You can also set it to a lower charging voltage to reduce ozone.

Another option is a pleated media air cleaner. It's less expensive and relies on many square feet of folded filter material to catch particles as the air passes through. There are various levels of media quality and price. The cleaning effectiveness of various models can be compared by their MERV (minimum efficiency reporting value) rating.

If you don't want to have the ducts in your home modified to install a new air cleaner, consider a self-charging electrostatic model. This slips into the existing furnace filter slot and is many times more effective than a fiberglass filter. Just the air flowing over the resin filter material creates a charge that traps more dirt particles.

Another option is a bypass HEPA (high efficiency particle air) cleaner that has its own air circulation motor. It's a very dense filter, which makes it very effective, but it may create too much resistance for the furnace blower to force adequate air flow through it. The bypass design has its own blower so the air flow through the coils or heat exchanger is not impeded.

With any central air cleaner, it cleans only when a furnace/air conditioner blower is running. To get around this, Aprilaire® offers a new controller which mounts next to the wall thermostat. It allows you to automatically run the blower for any length of time when no heating or cooling is needed.

Visit dulley.com for more home improvement and do-it-yourself tips.

Above: Compared to a standard fiberglass filter, a thick pleated media air cleaner usually requires professional installation for the duct modifications needed.

Companies that offer whole-house air cleaners:

Aprilaire
800-334-6011, aprilaire.com

Dust Free
800-441-1107, dustfree.com

Lakeair
800-558-9436, lakeair.com

Pure Air Systems
800-869-8025, pureairsystems.com

Trane
888-232-5290, trane.com

James Dulley *is a nationally recognized mechanical engineer writing about home energy issues for the National Rural Electric Cooperaive Association.*

Look Up, Stay Alert During Outdoor Work, Play

As the weather turns to warm, adults and kids alike will head outside to perform winter clean-up and play. Before they do, remind them to look up, down and around, and be alert for power lines and other electrical hazards—it's the best way to stay safe from electrocution, and even death.

"Here at Cherryland Electric Cooperative, using proper procedures and safety measures is a matter of life and death," explains Jim Carpenter, line superintendent and safety director. "We take safety seriously at home, too. Accidents happen, but if we educate ourselves and our children, we can keep them to a minimum." See a few safety tips below…

For Kids . . .

Never fly a kite on a rainy day or anywhere but an open space. A high point in the sky makes a kite a grounding point for lightning, and kites could easily become tangled in power lines.

Don't climb trees that are near power lines and poles—both evergreens and leafy trees can disguise danger.

Never climb a power pole.

Stay far away from power lines lying on the ground. You can't tell just by looking if electricity is still flowing through them. If there's water nearby, don't go in it. Water is the best conductor of electricity.

Obey signs that say "danger" and "keep out" around large electrical equipment, like substations. These signs aren't warnings; they're commands to keep you safe.

For Adults . . .

Power lines tend to become part of the landscape, so before climbing a ladder to trim branches or access your roof, look around to make sure you are not in close proximity to electric lines.

Remember that power lines and other utilities run underground, too. Call 811 to have utility lines marked before you start digging.

Starting that winter cleanup yard work? Sweep dried leaves and debris from outdoor receptacles.

If they're not already, consider upgrading your outdoor receptacles—or any outlets that could come in contact with water—to ground fault circuit interrupters (GFCIs). GFCIs immediately interrupt power flow when a plugged-in device comes in contact with water. Regardless, keep your outlets and cords dry and covered outside.

Use only weather-resistant, heavy-duty extension cords marked for outdoor use.

Don't leave outdoor power tools unattended for curious children or animals to find.

For more safety tips and information, visit ***SafeElectricity.org****.*

Sources: Electrical Safety Foundation International, Safe Electricity

Here's What *About*

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Cherryland Electric Cooperative

Water Wars

Keeping our water clean is a shared responsibility, whether in our backyard or Lake Michigan.

Sometime in the fall of 1944, a drunken driver dove his car into the basement of the unfinished house where we would one day live. We found this out 36 years later from the carpenters who were remodeling the house to make room for our expanding family. It wasn't the only time something unwanted ended up in our basement.

The name of that driver is probably lost to history, but his escapade, likely the subject of many jokes at his expense, lives on in the lore of a house we never intended to be our permanent home. But here we are.

We adapted, as humans are prone to do, and we've made it ours, this house that was built from bartered war-scarce materials by a local fuel oil dealer in a field outside the city limits.

It's had more than its share of remodeling, and it's become the stage from which we engage the world. It's our home. An observation in a terrific book, "The Fault In Our Stars" by John Green, has stayed with me: "The weird thing about houses is that they almost always look like nothing is happening inside of them, even though they contain most of our lives."

No one tells you when you buy a house, especially in the country, just how large a role water will play in your life. We've learned how to deal with a flooded basement, well water, septic systems, sump crocks, ice dams, water softeners, well pumps and expansion tanks, drainage, standing water and mosquitoes. I've become a decent plumber, if I do say so myself. Just think what I would have missed if we lived in a city apartment.

But water so coveted in the desert is unwelcome in a leaky boat—or a house. We get too much water when we don't need it and not enough when we do. Farmers are forever wary about droughts and floods, both devastating. Forest fires start during dry times and are impossible to extinguish without water.

We need it, of course. But why so much at once? That's what I wonder when we get massive downpours that flood our yards and basements, or when it falls frozen in winter, blanketing everything in white and raising havoc with driving and electricity.

It's worst in spring. Snow melted, water lays in the yard, slowly eating away at the frost underneath, like acid. You may think that water is life-giving, a boost to all living things that spring in spring. But it has an evil twin. That twin relentlessly seeks out trouble: the tiny crack in a foundation and the open seam hiding where roof lines meet.

We found out many years after buying the place that the septic system was nothing more than a 500-gallon tank with a single pipe outflow to a common field drain on our neighbor's property. That's not exactly code, although it was probably routine when the house was built. After years of seeing our yard turn into a smelly, soggy spring mess when the so-called septic system backed up, we got an industrial-strength mound system with three 1,000-gallon tanks and a malfunction alarm (which has the side benefit of looking like we have a home security system). Problem solved.

After snowmelt and spring rain flooded our basement a few times, we contracted with one of those dry basement system companies that dug around the foundation, installed a drain and waterproofed the concrete block. We invested in a battery-powered backup sump pump, because what good is a regular sump pump when the electricity is out. Our basement has been blissfully dry ever since. Problem solved.

We have a shallow well, which means we're tapping into water that's only 25 to 30 feet deep. (A good reason to make sure the septic system works.) Typical wells drilled around here now go down 180 feet. Old-timers tell us that the aquifer we're tapped into historically has the sweetest water around, and I agree. Even though shallow wells are now frowned upon because of health concerns, I've come to like this water and as long as water tests show the water is OK, we're not going deeper. No problem (but a bit of a worry).

The quality of the water in our rural homes is generally out of our hands, no matter what we do on the home front. It's affected by rainfall, minerals in the soil, runoff carrying pesticides and fertilizer, and drilling that cuts through the aquifers. Since so many of us in rural Michigan get our water from private wells—there is no equivalent to rural electric co-ops for the distribution of water, and water must be tested and protected. (To find out about testing your drinking water, go to michigan.gov/deq or contact your county health department. There is a fee.)

We are blessed with abundant water in Michigan. We think of it as our ace-in-the-hole—how it will help us prosper when the rest of the country runs out of fresh water. But it won't be any good to anyone if it's not protected.

Losing access to good water would be worse than a drunk driving into your basement.

Mike Buda is editor emeritus of Country Lines. Email Mike at mike.f.buda@gmail.com or comment on his columns at countrylines.com/ramblings.

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SHOWCASE HOMES Wanted!

*We would like to use your home to showcase a beautiful American Metal Roof. Qualified homes can earn big discounts off the price of an American. Call today to see if your home qualifies. Call Jenn at:

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Country Manor Shake in Mustang Brown

Oxford in Forest Green

Rustic in Deep Charcoal

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- Key ..... Amount to Pay
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