



IMPACT

A PUBLICATION OF THE DOW CHEMICAL COMPANY'S MICHIGAN OPERATIONS



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The tough winter is finally behind us, and we look forward to several months of sunny skies and warm weather. In spite of the snow and cold, many of us still managed to get out during the winter months and volunteer in the wonderful Great Lakes Bay Region.

Our employees are some of the most active volunteers in the region. In this edition of Impact Magazine, step behind the scenes with us as we share how our employees are finding the perfect match – matching volunteer needs with community service – and how this process benefits area non-profit organizations. From developing programs on leadership and career training for youth to organizing robotics competitions to renovating facilities in a century-old park, Dow employees show their commitment to the great community in which they live and work. Last year, Dow employees performed nearly 9,500 volunteer hours through VolunteerMatch, and our goal is to reach 15,000 hours in 2014 – it's a challenge we will work hard to meet.

I hope you will be inspired by the stories we feature in this issue – I am. Volunteer opportunities are all around us and by working together, we can make our communities even stronger. We are proud of the many valuable community partnerships we've built through the years here in the Great Lakes Bay Region and look forward to even stronger relationships in the future.

A handwritten signature in blue ink that reads "Rich Wells". The signature is stylized and written in a cursive-like font.

Rich Wells
Vice President and Site Director
Michigan Operations

Dow Saluted

FOR COMMITMENT TO MILITARY

On a late afternoon in the waning days of summer 2013, several Dow employees stood on the baseball diamond at the Great Lakes Loons baseball game to accept an award recognizing the company's commitment to military Guard and Reserve employees. Because few things are as quintessentially American as baseball and support of men and women serving in the U.S. armed forces, it was a day to remember.

Dow received the Pro Patria Award that day, an award presented by the Employer Support of the Guard and Reserve (ESGR), an arm of the Department of Defense that promotes cooperation and understanding between reservists and their civilian employers. ESGR committees at the state level recognize one public sector employer in their state each year, and recipients are selected based on how well they demonstrate support to Guard and Reserve employees through their leadership and practices.

State ESGR Chairman Paul Ryan traveled to Midland to present the award to Dow at the game. Rich Wells, vice president and site director at Michigan Operations, accepted the award for Dow. "Dow supports the sacrifice of all of the men and women who serve now, or have served, in the armed services," he said at the time. "Our hope is that our military service members know that we are a champion of their efforts and a resource for them."

A Grassroots Effort

The need to champion Guard and Reserve members has skyrocketed in the last decade. September 11, 2001, deeply changed the lives of these soldiers, many of whom have

Dow employees, Jeremy Jordan, Scott Grice, and Todd Skinner put boxes together for a CARE package drive to support members of the Michigan National Guard deployed to Afghanistan.



"Dow supports the sacrifice of all of the men and women who serve now, or have served in the armed forces."

– Rich Wells, Vice President and Site Director, Michigan Operations

served through multiple deployments, and the subsequent effects on companies like Dow has been significant.

How can Dow best assist employees going on active duty, help managers fill the void in a reservist's absence, help Reserve and Guard employees stay in touch while they're deployed and acclimate back into Dow when they return? These and dozens of other questions have been sorted through to ensure Dow employees serving in the armed forces are fully supported by the company before, during and after deployments.

While formal changes have occurred – like an enhanced leave policy that makes up the difference in pay while employees are on military orders and continues their insurance benefits – much of the activity around veterans support has been informal.

A network of Dow veterans, called the Veterans Community Outreach Team (VCOT), for example, supports military families in many ways. Formed in 2010 by Navy veteran Brad Blanchard, a senior Health & Safety delivery technician at Michigan Operations, the VCOT team strives to do one service project a month.

Cynthia Soney, U.S. immigration specialist in Workforce Planning for Dow, organizes an effort to send military branch flags – U.S. Army, U.S. Marine Corps, U.S. Coast Guard, for example – to returning soldiers. Signed by Dow executives in Midland as a demonstration of support and gratitude, the flags are then sent to the Dow employee.

Eddie Kennedy, a 32-year Dow employee and a veteran of U.S. Army 82nd Airborne (a paratrooper), has been sought out for several years now to help newly hired veterans acclimate to Dow. "These aren't kids. These are West Point graduates, they're MBAs, they're extremely capable individuals," he says. "They have all the skills we need at Dow to lead teams or be exceptional team members. I talk with them about the company and they see some value in talking to another veteran who's been around Dow for 30 years."



Doing the Right Thing

Dow recently created a steering team to identify new ways the company can support veterans and active Reserve and Guard employees. Rich, Eddie and Cynthia each serve on the committee, as do Pat Birgy, an audit project manager for Dow and a major in the Army Reserves, and several other employees.

Pat says the creation of the committee reflects Dow's commitment to veterans. "We're a company of compassionate people with a strong sense of national pride and civic duty. We want to do the right thing, and anytime we can help a veteran or an active Reserve or Guard member, we'll do it."



"Our hope is that our military service members know that we are a champion of their efforts and a resource for them."

– Rich Wells, Vice President and Site Director, Michigan Operations

DOW CREATES

A Competitive

A Sled Redesign for Team USA Luge

When Erin Hamlin claimed bronze in women's luge in Sochi, Russia, last February, she became the first American – and first non-European athlete – to earn an Olympic medal in singles luge. No one was more excited for Erin and her history-making run than her fans at Dow Michigan Operations who helped re-engineer and manufacture Team USA's sleds.

Dow developed USA Luge's first brand-new sleds in almost 20 years by incorporating new materials, design features and engineering to replace an aging fleet of sleds. In addition, components of the sleds were made in Midland by Dow employees.

The technical partnership started in 2007 but warmed up for the Sochi 2014 Olympic Winter Games in early 2012, initially focusing on the sleds' kufens (German for runners). Working in close partnership with USA Luge, more than 15 members of Dow's Materials Science team

Michigan Operations scientists Jay Tudor (L) and Scott Burr (R)



Bronze medalist Erin Hamlin



Edge

redesigned the kufens for increased speed and sled handling. Advanced materials, including carbon fiber composites, replaced the kufens' traditional wood cores. The redesign quickly evolved from there to improvements to the entire sled structure.

Every detail counts in this fast-paced sport where 1/100th of a second can make a difference between a gold, silver or bronze medal. "What we did was provide the latest technology in design, engineering and manufacturing into the sport of luge," says Jay Tudor, research scientist, Dow Core R&D.

Researchers tailored Dow's cutting-edge materials and composites used in the automotive and construction industries for the sled runners. The team from the Research and Development Division in Midland included manufacturing specialists and experts in machining, rapid prototyping and industrial design.

The collaboration with USA Luge demonstrates how Dow works with customers to understand their challenges and come up with innovative, tailor-made solutions for complex problems. Moreover, the experience gave Dow employees an opportunity to connect to the science, art and heart of the sport.

"The toughest part was figuring out what was needed, what was faster. The most amazing thing for everybody in the whole project was learning about the heart and determination of world-class athletes," says Scott Burr, senior R&D manager.

Dow is a Worldwide Partner of the Olympic Games. For more information, go to <http://olympicpartnership.dow.com/en/olympic-partnership>. A short video detailing Dow's winning partnership with USA Luge is available on YouTube (www.youtube.com/watch?v=RNj5OUNahSw).



Bronze medalist Erin Hamlin

Learning Luge

Luge, the French word for sled, features one- and two-person sleds that race on a refrigerated track with banked curves and walled-in straightaways. Although luge was inaugurated as an Olympic sport in 1964, its history goes back to the 15th century.

The Beginning: Luge was first referenced in Norway in the 1480s.

Racing the World: The first international luge race was in February 1883. It included a team from the U.S. and the winning time for the 2.5 mile course was 9 minutes 15 seconds.

First U.S. Olympic Team: For the 1964 Winter Games, the United States' first Olympic luge team consisted mainly of American soldiers stationed in Europe.

Hello Olympic Medals: The U.S. won its first Olympic luge medals – silver and bronze in the doubles' competition – in the 1998 Nagano, Japan, Winter Olympics.

Ready to Ride: Participants ride on the sled face up and feet first. They steer by flexing the sled's runners with their calves or exerting opposite shoulder pressure to the seat.

Winning Students Over TO STEM EDUCATION

How do you get teens interested in science, technology, engineering and mathematics (STEM)? The same way you get them interested in anything else: make some noise, dial up the energy, create an intense competition or turn them loose on an adventure.

Over the past few years, Dow has sought out organizations and events that excel at drawing students into the oftentimes misunderstood but always fascinating world of STEM careers.

“It’s all about getting students interested in STEM education and open to new possibilities for their careers,” says Rob Vallentine, global director of STEM Education at Dow. “We provide financial support, but we also commit passionate and dedicated employees who volunteer their time to these efforts.”

“Uninterested students plus unprepared students equals unrealized opportunity. We want to change that equation because we believe interested students plus STEM education equates to realized opportunities.”

– Rob Vallentine, global director of STEM Education, Dow

Great Lakes Bay Science & Engineering Festival

Last October nearly 5,000 middle school students from Midland, Bay City and Saginaw, along with teachers and parents, attended the Great Lakes Bay Science & Engineering Festival. The two-day event sponsored by Dow was hosted by Michigan Technological University and Delta College on the Delta College campus and featured the Michigan Tech Mind Trekkers and the American Chemical Society Midland Section’s SciFest. The festival is designed to get children, adolescents and their families excited about science and engineering by engaging them in hands-on activities.

De-Wei Yin, associate research engineer at Dow Core R&D Engineering & Process Science, was a volunteer organizer of the event. “As many as a dozen non-profit exhibitors at the Festival involved Dow volunteers, so this was truly a community effort to reach out to local students.”

Mind Trekkers

“Mind Trekkers is like a STEM concert, a carnival and a circus smashed into one big monster – a science and engineering rock show.” That’s how one Michigan Technological University (MTU) staff member describes MTU’s groundbreaking STEM educational program targeting middle and high school students.

Steve Patchin, director of Mind Trekkers, says the intent of the program is to make the connection between science and excitement. “No age group produces more serotonin than middle schoolers. We create a high-energy atmosphere that blows their minds, and we want them to link that high-intensity fun to science.”

After a successful inaugural event last year, the company partnered with Mind Trekkers to bring the unique program to the 250,000 students who attended the USA Science & Engineering Festival over three days in April in Washington, D.C.

For more information, go to <http://mindtrekkers.mtu.edu>.

FIRST® Robotics Competition

FIRST Robotics is “Rocky” meets “Tron.” In this competition, remote-controlled robots, created and piloted by students and cheered on by thousands of screaming fans, go head-to-head in 120-second battles in a sports area. The annual event is the perfect combination of high-intensity sport and science and technology.





“My son graduated years ago but I keep coming back because of the impact this competition has on the kids,” says Mike Rehberg, an investment manager at Dow and president of FIRST of the Great Lakes Bay Region. “They discover that science and technology is actually exciting and that they can have a career in these fields.”

Dow has long sponsored four veteran *FIRST* teams from the Great Lakes Bay Region. The company also recently began sponsoring 12 rookie teams that formed this year after Michigan Gov. Rick Snyder encouraged participation in the competition and sponsored the 2014 Great Lakes Bay Region *FIRST* Robotics District Competition held in March in Midland.

To learn more about *FIRST* Competition in the GLBR, go to <http://www.first-glbr.org>, and in Michigan, go to <http://www.firstinmichigan.org>.

Science Bowl

A tradition spanning more than 15 years was renewed on March 15 when the Midland chapter of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers hosted the Great Lakes Bay Region NOBCChe Science Bowl at Saginaw Valley State University.

Dow sponsored the event, which involved 13 teams from high schools and middle schools across the region that competed in the double-elimination competition, demonstrating their understanding of science and math and their knowledge of transformative African-American inventors and scientists.

“Dow’s success is built on innovation and scientific discovery, and our future is in the hands of people who can build on that legacy,” says Takiya Foskey, Dow scientist and volunteer. “The students in this competition are that future, and the more we can do to support them, the better off everyone will be.”

Science Fair

The science fair has become a time-tested and beloved cornerstone of science education in the U.S. For decades these events have given students the opportunity to showcase their research and findings to other students, teachers and parents.

This year students from all over our region showcased their science projects March 22 during the Great Lakes Bay Regional Science & Technology Fair at The Dow Event Center. More than 200 students presented their work during the event.

“Besides developing the skills they need to be able to bring to the plate, you see a real sense of pride and confidence in the students,” says scientist and volunteer Chris Dillard. “And you see more of a motivation to go into math and science as a career.”

The fair was sponsored by Dow and Saginaw Public Schools.



Spirit of Volunteerism

It's said that teamwork "divides the task and multiplies the success." No one knows this better than the recipients of DowGives Project Challenge Volunteer Grants. Through these grants, Dow provides funding to nonprofit organizations for projects that have at least 100 Dow employee volunteers. Five DowGives Project Challenge Volunteer Grants projects were completed across the Great Lakes Bay Region in 2013.

Carroll Park

Bay City's Carroll Park is used by a broad cross-section of the community, but its century-old facilities were showing their age. "Local legend says the park was designed by the designer of New York City's Central Park," says Brad Blanchard, Health & Safety technologist in Dow's Energy and Utilities and Environmental Operations Tech Center. "There's a lot of history, and it's like nothing you see today."

In partnership with the local Honor Campers Society (Order of the Arrow) of the Boy Scouts and Habitat for Humanity, the project team renovated a building, refurbished four tennis courts, and tackled smaller projects such as repairing and painting a bridge. Having worked with Boy Scouts groups in the past, Brad stepped in when the original project leader transferred to another Dow location.

"It's a great example of using resources to complete a task in a thrifty way, consistent with the ninth point of the Scout Law (*A Scout is Thrifty*)," says Thomas Oleniacz, program director, Boy Scouts of America, Water and Woods Field Service Council, Auburn Service Center.

Fraternal North West Little League/ Northeast Little League

To provide suitable baseball facilities for local youth, two Midland-area leagues combined efforts to build three new fields for 13- to 16-year-olds. "Once kids left Little League, there was really nowhere for them to play until high school," says Blair Patty, account executive, Dow Automotive.

Blair and his wife, Diana, were among six families dedicated to fundraising the \$400,000 required to build three new fields for the Midland area. Blair worked with fellow Dow employees Mary Draves, Jean Servinski and Mitch Willis. One new field was completed behind Northeast Middle School last season and the two remaining fields will be operational this year.

"The committee is extremely appreciative of DowGives and everyone's effort to provide improved baseball facilities for a high-quality baseball experience for our local youth," says Blair.



More than 250 volunteers from Dow, the Boy Scouts, the neighborhood and law enforcement, along with a crew from the city, worked for four days in August to complete the majority of the work at Bay City's Carroll Park.





In October, Dow volunteers helped clear trees to help make way for a new day camp pavilion at the Girl Scouts Heart of Michigan's Saginaw Service Center, which serves approximately 4,000 local girls.

Girl Scouts Pavilion

Girl Scouts Heart of Michigan (GSHoM) didn't have much program space for the 4,000 members at its Saginaw Service Center, so this DowGives project provided a new pavilion. Dow volunteers helped clear trees around the wooded property, build a dumpster enclosure, and excavate and level the pavilion site before they helped build the pavilion itself.

"The Saginaw Service Center serves 20 percent of our region's membership," says Matt Bates, chief information and property officer, GSHoM. "A Girl Scout career usually begins with a successful day camp experience. Where there is program space available, we have more girls participating, and they come back for more activities."

Heidi Fransen, Molecule Technology leader at Dow, sits on the Board of Trustees for GSHoM and submitted the DowGives application. "Through Girl Scouts, my daughter has been exposed to leadership opportunities and goal-setting, and she's so motivated," says Heidi. "She's my inspiration."

Roethke House

The Roethke Home Museum in Saginaw is the childhood home of internationally renowned poet Theodore Roethke and a National Literary Landmark. Roethke, who won the

Pulitzer Prize and was recently featured on a U.S. postage stamp, drew inspiration for some of his most famous poems from his family's greenhouse that was located in what is now the Museum's backyard.

"Our Foundation was operating pretty much month-to-month for 15 years," says Annie Ransford, president, Friends of Theodore Roethke Foundation. "The Dow support, in the form of human capital and much-needed funding, allowed us to restore essentially the whole museum and yard."

"The Roethke restoration was a unique opportunity for Dow and our volunteer team to make a significant and lasting impact on the cultural and historical landscape of the region," says Mike Kolleth, senior director, Dow Public Affairs, and leader of this particular DowGives project. "I drive by the Roethke Museum nearly every day – every time it makes me proud to be an employee of our great company and to work with such caring and committed people."

Salvation Army Midland Corps

Steve Sklenar works in the Treasury department at Dow and is the chair of the Midland Salvation Army Advisory Board. He applied for a DowGives grant to build a multipurpose activities court for the organization and surrounding neighborhood. The Salvation Army operates charity shops and shelters, and provides recreational programs for children. The new court can accommodate basketball, tennis and ball hockey.

"Up front it seems like such a simple idea: lay some concrete and erect a basketball hoop," says Captain Brian Goodwill, Midland Corps Officer, The Salvation Army. "But in reality, things were much more complicated. Thankfully, we had amazing volunteers helping us with the entire timeline of the project, navigating the needs of the city, installing the light post and getting it properly connected to the electrical panel in the basement of our building."

From left to right, Captain Brian Goodwill, The Salvation Army Midland Corps Officer; Steve Sklenar, then treasurer of The Salvation Army Corps' Advisory Board; and Nick Lorenz, a volunteer from Dow Chemical, at the dedication of the multipurpose activities court for the Salvation Army and surrounding neighborhood in June.



DOW VOLUNTEERS

Are in Your Community

The spirit of a community lives in the engagement and energy of its residents, those who are passionate about making a difference and finding ways to do it. With vision, commitment and the right resources, much is possible. During 2013, three projects in Saginaw and Bay City were identified and propelled forward by the efforts of local residents who just happen to be Dow employees.



Bay City: All Hands on Deck

In September, more than 50 pairs of hands belonging to a contingent of Dow volunteers, including members of Dow's Veterans Community Outreach Team, spent the day building and beautifying near Independence Park in Bangor Township where the USS Edson floating museum is berthed. In 2012, the Saginaw Valley Naval Ship Museum (SVNSM) acquired the USS Edson, a museum-quality warship, to commemorate the commitment of shipbuilders in the Great Lakes Bay region. Dow has been a significant contributor to the ongoing project since the acquisition, providing both financial support and volunteers.

"The skills and passion of our employees are invaluable to non-profit organizations that typically operate with small staffs and depend on unpaid volunteers."

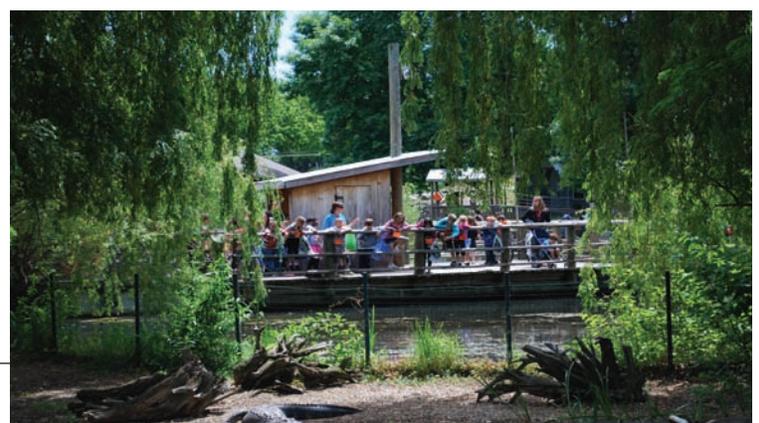
— Joan Bouza, Dow Business Office Director

Saginaw: Making it Accessible

The Saginaw Children's Zoo at Celebration Square is a favorite destination for children of all ages, and a down-to-earth place where guests can observe, interact and learn about creatures, from the domestic to the exotic, while meandering along outdoor pathways.

Pathways posed a challenge for some visitors because they were covered in woodchips and not easily negotiable by walkers, strollers or wheelchairs. That's no longer the case, thanks to work initiated by Kristin Hoepfner-Rupp, a cross-business representative in Dow's Customer Information Group.

"We wanted our project to benefit the residents of Saginaw, and because the zoo is so popular, that idea took hold," says Kristin.





“The Center is a source of neighborhood pride, so the outreach by Dow is especially meaningful. The Dow volunteers showed a genuine desire to make a difference in our community.”

– Ceciel Reed, Treasurer, Board of Directors

“What Dow did for us is incredible. They transformed an entire area, and by bringing their own children to volunteer they’ve instilled the importance of volunteerism and helping. This is a gift to the community and to future generations.”

– Nancy Parker, Children’s Zoo Executive Director/President

Saginaw: Spruced Up Learning Environment

Dow volunteers also made a difference last August for the Houghton-Jones Neighborhood Association, a Saginaw neighborhood improvement organization. With funding from Dow, volunteers prepped, primed and painted the Johnson Street Resource Center classrooms and basement. The Center is a community resource for recreation and activities.

Stephanie Hall, Sr. Administrative Specialist at Dow, says volunteers are vital to community success. “I grew up in the Houghton-Jones neighborhood, and I have volunteered on many occasions. Their tutoring sessions and the after-school programs are essential to the success of our youth.”



THE POWER OF

Partnerships

Midland Area Community Centers and Dow

For nearly a century, Dow and its employees have partnered with the community to strengthen families, encourage wellness and care for individuals. Few examples illustrate this better than Dow's longstanding support of the Midland Community Centers.

"Herbert Henry Dow started the Midland Community Center in 1917," says Chris Tointon, CEO of Greater Midland Community Centers. "The history books say Dow had a study done that showed there are three things that make a company strong: great housing, strong community centers and public libraries. So Dow's commitment to community started nearly 100 years ago."

Today the Midland Community Center remains an integral part of the region and is one of five centers managed by the Greater Midland Community Centers. GMCC serves more than 85,000 people each year and offers premier fitness facilities and athletic opportunities for individuals, groups and teams, but its role in the community goes beyond supporting residents' physical health. The organization has a rich heritage of caring for the community, offering diverse programs that impact residents' emotional well-being, safety and security such as Safety Town for kindergartners, a dedicated center and programs for residents over 50 years old, after-school care and summer camps.

"We've had a close partnership with Dow and with Dow's employees and retirees because it's what makes us a strong community," says Chris. "It's what makes Midland a great place for companies and their families."

Greater Midland Community Centers

Midland Community Center

Midland Community Tennis Center

Midland Curling Club

North Midland Family Center

Railway Family Center

Greater Life Wellness Centers

Greater Reach Consulting Group

Sponsorship & Volunteerism

The most visible elements of Dow's involvement in the GMCC are the volunteer efforts of its employees and program sponsorships.

The Dow Weekend of Races is a prime example. What started 30 years ago as a handful of Dow employees running a race has blossomed into the Dow Weekend of Races, a two-day, family-friendly community celebration enjoyed by thousands of runners and spectators. The event draws nearly 5,000 participants and another 10,000 spectators.

Dow also sponsors the Dow Corning Tennis Classic, the longest running women's tennis tournament on the pro circuit, and co-sponsors the annual Loons Pennant Race with the Great Lakes Loons baseball team. The event, which promotes school running programs, includes 5K and 10K runs through downtown Midland.

Dow employees and retirees volunteer at all of these events and many more. "The many Dow volunteers commit hundreds and maybe thousands of hours of their time every year to the Greater Midland Community Centers activities and programs," says Chris. "They coach youth teams, help staff special events and fundraisers, sit on our operating boards – the list goes on and on."

Behind the Scenes

The trusting relationship between GMCC and Dow forged from a mutual commitment to Midland provides the basis for Dow to offer more than partnerships and hands-on volunteers. Dow employees also provide leadership.



At least one Dow leader currently sits on every operating board of the GMCC and its various centers. They have provided assistance with such areas as strategic planning, human resources and information technology consultation.

Terri Johnson, global director, Public Affairs & Government Affairs at Dow, and a member of the GMCC board of trustees, says Dow's support of the GMCC is steadfast. "We have an unwavering commitment to the GMCC because of what it means to our community and the region. We realize that whatever we do for GMCC, through Dow's financial support or the gracious time and expertise from our employees – whether that's coaching a basketball team, sitting on a board, or volunteering at an event – we do it for the betterment of the entire community."

Focus on Wellness

During the past two years, the GMCC began operating Dow's onsite wellness centers and supporting offsite wellness centers with education materials and teaching tools to build stronger outreach with Dow's employees and retirees.

"Through athletics, family fun nights, festivities and running events, we are doing things that get people up and moving and creating the sense that active lifestyles are important for a community," Chris says.

Nearly 100 years after establishing the Midland Community Center to strengthen Midland, Herbert Henry Dow would likely agree.



"The many Dow volunteers commit hundreds and maybe thousands of hours of their time every year to the Greater Midland Community Centers activities and programs. They coach youth teams, help staff special events and fundraisers, sit on our operating boards – the list goes on and on."

– Chris Toiton, CEO of Greater Midland Community Centers



Agricultural Products Prove Big in Michigan Operations

Feeding the world is becoming increasingly challenging as the global population rises and there are finite land and water resources. Enter innovators like Dow AgroSciences, a wholly owned subsidiary of Dow, whose crop protection products are helping to provide an adequate food supply for the world's growing number of inhabitants.

Dow AgroSciences manufacturing plants amount to almost 50 percent of production facilities at the Michigan Operations site. The company, based in Indianapolis, Ind., makes crop protection products that increase crop productivity through higher yields, better varieties and more targeted pest management control.

"These types of products are highly active, meaning a small amount goes a long way," says Rich Wells, vice president and site director, Michigan Operations. "On the production side, the design of this site allows for smaller volumes of very complex chemistries. This site is a valuable, viable place to make highly complex chemistries."

The World of Crop Protection

A key focus for Dow AgroSciences is crop protection. Farmers are challenged to feed a fast-growing global population, and crop protection technologies are critical to being a solution for a growing world.

"One facility on our site produces four separate active ingredients for cereals that allow enough cereals to be grown to feed millions of people per year – that's more than the population of the United States," Rich says. Crop protection products are designed to allow crops such as rice, corn and wheat to thrive through greater yield, or bushels per acre.

New Technology

Agricultural products manufactured at Michigan Operations protect both food and fiber crops. The site makes Isoclast Active™ (sulfoxaflor), for example, a breakthrough insecticide that targets sap-feeding insects that damage crops and reduce yield.

Isoclast belongs to a novel chemical class called sulfoximines, discovered by Dow, and offers effective control of many important sap-feeding insect pests.



The Sulfonamides group (shown above) produces key active and intermediate herbicide molecules for the corn, soybean, rice and cereals businesses for Dow AgroSciences.

The Next Wave

A more recent development in crop protection involves the plant itself and calls for adding specific traits into the crop to allow it to protect itself. "Dow can bring those two components together to complement each other," says Rich. "When the seed trait is combined with the right crop protection product, the combination is greater than the sum of its parts."

An example of that "system" approach involves reinventing the herbicide 2,4,D, produced at Michigan Operations. "2,4,D is an effective herbicide," says Rich.

"The Enlist™ Weed Control System combines this highly effective crop protection product with a trait to make the crop tolerant to the herbicide."

Growth at Michigan Operations will come through two things – new product development and meeting demand for existing products.

"As Dow continues its transformation to a more solutions-oriented company, this focus on high-margin agricultural products is suited to Michigan Operations," says Rich. "It fits right into our sweet spot."

™ Regulatory approvals are pending for the Enlist™ herbicide solution and crops containing Enlist herbicide tolerance traits. The information presented here is not an offer for sale. Always read and follow label directions. ©2014 Dow AgroSciences LLC

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Science Lab on the Go

Dow Science and Sustainability Education Center at SVSU to Launch this Summer

A high school senior conducts a DNA sequencing experiment to determine genetic diversity in phragmites (invasive wetland grasses). With the help of a Saginaw Valley State University (SVSU) undergraduate student, a fourth-grader collects water samples from a wetlands pond and analyzes them under a microscope in a mobile lab. A school teacher works with SVSU professors on campus to examine water quality in the Kawkawlin River.

These scenarios in which SVSU students and faculty actively engage and mentor students and teachers in the community will soon be the reality when the Dow Science and Sustainability Education Center launches this summer. The new center was announced in October 2013 in honor of SVSU's 50th anniversary, and is the result of a successful collaboration between SVSU and Dow that spans the university's entire five decades.

"We wanted to do something special to help commemorate SVSU's 50th anniversary and couldn't think of a better way than by helping create a program that expands undergraduate research and allows their study body and faculty to reach out to area high school students and teachers," says Vicki Rupp, director, Service Management, Dow Business Services, and SVSU alumna. "Ultimately, our goal is to prepare a workforce with advanced skills in STEM (science, technology, engineering and mathematics) fields that can compete globally."

The center will be located on the SVSU campus either at the Doan Science Center or the Regional Education Center. However, a mobile lab will be the core learning site, providing a hands-on educational experience for students and teachers that exposes them to modern methods of research and provides inspiration for students to study science at the college level.

"The center will be broad in scope, involving environmental science and other STEM fields," says Dr. Deborah Huntley, dean of SVSU's College of Science,

"Ultimately, our goal is to prepare a workforce with advanced skills in STEM (science, technology, engineering and mathematics) fields that can compete globally."

– Vicki Rupp, Director, Service Management, Dow Business Services



Engineering and Technology. "It will serve the greater community with its mobile lab, which will be used for remote sampling and for outreach to schools and the community. We plan to conduct the research-based component as a pilot this summer – with full implementation next summer. We hope to have the mobile lab operational in the next school year."

The endeavor will enhance STEM education at the university level as SVSU students mentor and conduct experimental research with younger students. It also will strengthen the pipeline of students interested in STEM through community- and school-outreach programs, while at the same time educating the community about the Saginaw Bay Watershed.

"This partnership demonstrates SVSU and Dow's shared commitment to creating the next generation of students interested in STEM careers and to the research of the bay area," Dr. Huntley says.

1,000 DOW VOLUNTEERS

Help Change

Nearly 1,000 Dow employees and retirees dropped their daily routines in favor of hammers, sanders and saws last year to help revitalize neighborhoods and build a new home in Saginaw and Midland counties in partnership with Habitat for Humanity.

A Fresh Look

Habitat for Humanity has a global mission to end homelessness and provide decent, safe and affordable housing. In two weeklong events held last summer, nearly 900 Dow employee volunteers coordinated by United Way helped realize that vision through Habitat's Neighborhood Revitalization Initiative. The Saginaw County event took place in early June and the Midland County event in early August. About 50 houses were revitalized between the two. It was the fourth consecutive year Dow employees have participated in the events.

"What started out small has gotten really big," says Melissa Eigner, Dow's corporate volunteer manager. "It's gotten so big, in fact, Habitat now tells me the maximum amount of volunteers we can have."

The Neighborhood Revitalization Initiative provides critical exterior home repair for low-income families and senior citizens. Repairs include painting, roofing, insulation, weatherization, window and door repair, and other minor projects.

Among the Dow employee volunteers who participated in the Neighborhood Revitalization Initiative in Saginaw was a small work group organized by Chris Menzies, an R&D technologist at Dow. He's been organizing teams for this effort each of the last four years and says he does it because it's the right thing to do.

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— Melissa Eigner, Dow's Corporate Volunteer Manager

"I'd been thinking for some time about how I could give back to my community," he says. "I used the company's volunteer matching website and it matched what I enjoy doing with projects in our community, so it was an easy decision to sign up and to invite coworkers to do it with me. And besides, it's just so nice to see the folks whose homes you're working on – they're so appreciative and it makes you know you're doing the right thing."

Jennifer Chappel, executive director of Midland County Habitat for Humanity, says Dow has a strong history of support for the local organization. "This is Dow's 31st year as an international sponsor for Habitat, and they have been very generous to the local affiliates also. They've supported us in many ways beyond the building and revitalization projects. It's a great partnership, and we couldn't be more proud to be the Habitat for Humanity affiliate in Dow's backyard."

Celebrating 30 Years

To celebrate 30 years of a successful international partnership with Dow and honor the commitment of Dow employees over the years, Midland County Habitat for Humanity invited Dow retirees to participate in a house build last September. More than 100 proud retirees eagerly responded.



Neighborhoods and Lives

“Lori was so gracious, so appreciative. This is why we do what we do, why Dow employees and retirees volunteer their time.”

– Jennifer Chappel, Executive Director of Midland County Habitat for Humanity

The new homeowner was Lori Karbowski, who worked alongside the retirees to contribute her own sweat equity to the project. A single mother of a 7-year-old daughter, Lori was invited to speak at the Dow retiree luncheon the week the house was completed. In front of a room filled with the 100 retiree volunteers plus another 600 retirees, Lori tearfully and gratefully told the audience about the “penny wish” her daughter Nadia had made at school a few months prior: Nadia had wished for a house of their own.

“Lori was so gracious, so appreciative,” says Jennifer. “This is why we do what do, why Dow employees and retirees volunteer their time.”

Lori’s house is now one of the more than 25,000 Habitat homes that Dow has supported through financial or volunteer contributions around the world since 1983.



Lori and Nadia Karbowski enjoy their new home, a product of the Dow employees and retirees Habitat for Humanity build in Midland.



Aiming “HIRE”

Dow Employees Help Create a Career Skills Course

Dow wanted new employees with specific skills and training, and Dow’s John James had a group of young adults in mind for the jobs. He saw more than that, though. John saw an opportunity to connect the needs of his employer with the needs of his community: the HIRE program.

HIRE (Helping Individuals Retain Employment) is an innovative leadership and career exploration training course that is being hosted by First Ward Community Center (FWCC) in Saginaw in partnership with the Saginaw Valley African-American Leadership Training Institute, the Saginaw County Community Action Center, the Greater Michigan Construction Academy, and Great Lakes Bay Region employers.

Offered for the first time this spring, the 12-week program for 18- to 30-year-olds focuses on soft skills like interviewing, resume writing and exploring career options, according to Zack Bell, Dow Michigan Operations site logistics, industry park and real estate director. “As we move further into the program, we are considering the best approach for mentoring the participants.”

The idea is to build the participants’ employability skills and equip them for the continued learning, certifications and apprenticeships they will need for future career success.

First Ward Connections

“After moving from Houston to Midland, I started mentoring with the First Ward in 2009, donating whatever time I could to their activities,” says John, business process change lead for Dow’s Next Enterprise

Architecture (NEA) group. He joined the First Ward board in 2011 because he felt he could help with strategic development.

“The FWCC mission is to provide job-readiness programs for low-income families. Because Dow would need to hire resources for our NEA project implementation, this presented a win-win for Dow and the First Ward,” says John. “I shared the HIRE idea with Theresa Jones, Business Process Services Center director, and she was excited about expanding the potential pool of applicants.”

He also shared the idea with the leadership of Dow’s African-American Network, which included Karen Carter, a global strategic marketing director at Dow, and Zack. “They saw the opportunity to help increase the talent pipeline for Dow while making a positive impact on the community,” John says. “The three of us are from totally different career backgrounds, but we have collaborated to achieve more than we could have alone.”

Program Benefits

Michelle McGregor, CEO of First Ward Community Services, believes the HIRE program will have lasting impact on the individuals, their families, businesses and the greater community.

“The HIRE program impacts the participants first. Self-confidence in their abilities transfers toward producing a stronger work ethic as well as positioning them for new and better career opportunities. This program also helps eliminate personal barriers that hinder students from retaining gainful employment, which helps participants reconnect to the community,” she says.

Dow’s John James and Zack Bell volunteer with the First Ward Community Center and work with the HIRE program’s participants. “We have found an area where we have a passion and can see the impact we are making on people’s lives,” said John.



Perfect Match

Sometimes the biggest challenge to getting involved is knowing where to start. Dow and the United Ways of the Great Lakes Bay Region have a solution: they have joined together to provide the web site www.GoVolunteerNow.org, and the Dow-specific site, dow.volunteermatch.org.

Looking for ways to help its employees get more engaged in their communities, Dow created dow.volunteermatch.org in 2010 to help employees look for opportunities that match their interests, skills and availability.

The site promotes specific Dow employee volunteer needs, side-by-side with community opportunities to serve local non-profits throughout the Great Lakes Bay Region. “The skills and passion of employees can be of great value to non-profit organizations that typically operate with small staffs and depend on unpaid volunteers,” says Rich Wells, vice president and site director for Dow’s Michigan Operations.

The Dow web site adds Dow-sponsored events and activities, and allows employees to track their volunteer hours, an important feature since some Dow volunteer grants depend on employee involvement. Since 2010, more than 2,900 employees have registered with [volunteermatch](http://dow.volunteermatch.org) and 97 percent remain active. Even more impressive, these volunteers have logged almost 50,000 total volunteer hours.

“The web site opened the door for a lot of people,” says Melissa Eigner, United Way of Midland County corporate volunteer manager. “While we’ve always had a fantastic volunteer base at Dow, the web site allows visitors to tap into programs that are aligned with Dow’s business priorities, United Way partner agency opportunities, and needs at other agencies throughout

the region. It’s a one-stop shop for opportunities to volunteer your time and talents.”

“People are always asking us at United Way how they can get involved in their communities and how they can have an impact,” says Cherrie Benchley, executive director, United Way of Saginaw County. “This tool is their gateway to volunteerism. Signing up as a volunteer is easy. They can now explore volunteer opportunities throughout the region, using their ZIP code and key words to align with their interests or talents.”

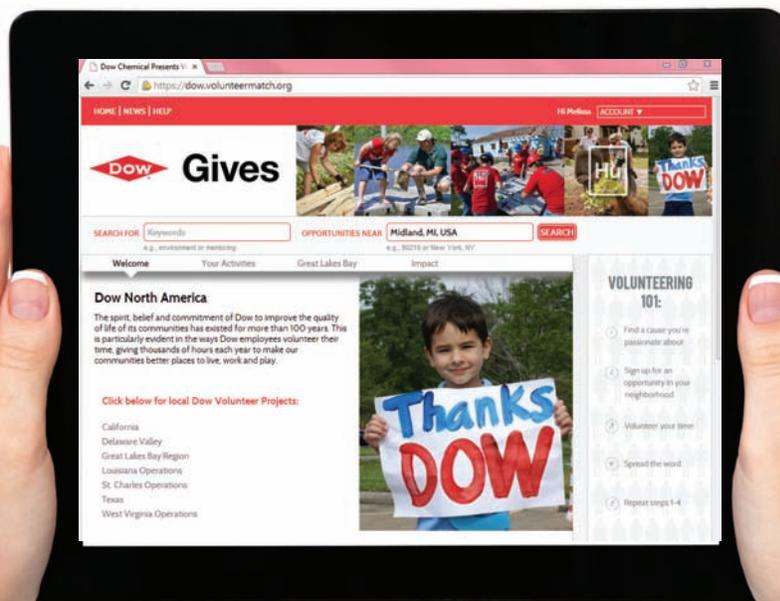
It’s Easy, Just Try It

Any volunteer opportunity in the Great Lakes Bay Region can be added to www.GoVolunteerNow.org and accessed by anyone in the community.

Jim Mitrano, lead technical manager, Dow AgroSciences Tech Center, had already been volunteering before he registered on the Dow web site. Still, he says the site helped him identify several opportunities he might not have found otherwise.

The efforts have paid off with larger numbers of volunteers in the counties outside of Midland in particular, and it has been so successful it has expanded to other regions with a Dow presence throughout the U.S.

“This has been an outstanding tool for us to connect volunteers to their area of interest across the Great Lakes Bay Region,” says Ann Fillmore, executive director, United Way of Midland County. “This web site provides something for everyone, whether you want to be a mentor to a child, deliver hot meals and friendly smiles to local shut-ins, or help stuff envelopes for a local non-profit. Choosing opportunities that matter to you helps others, builds stronger communities and enriches your own life.”



Better Together

EMPLOYEE NETWORKS DRIVE CHANGE

A diverse team of people working collaboratively solve problems, address issues and drive positive change. Recognizing this, Dow is a passionate advocate for its employee networks, informal groups that provide employees with opportunities to share life experiences and perspectives, and to learn from one another. Membership in any network is open to any employee. Dow's employee networks do more than improve the Dow work experience. They provide avenues of volunteerism for the company's employees. To learn more about the impact these groups are having in the community, read on.

African-American Network (AAN)



John James, Purchasing NEA Business Process change leader

For nearly 15 years, AAN has helped employees explore mentoring opportunities and share experiences with colleagues and peers. With a focus on equipping employees to be big-picture contributors, Dow AAN also works with external partners like the National Society of Black Engineers, the National Action Council for Minorities in Engineering, and organizations that

share Dow's commitment to science, technology, engineering and mathematics (STEM) education. The network manages Dow Promise, an outreach program in which AAN members partner with external organizations to help young African-Americans in Dow communities to overcome educational and economic challenges.

The AAN is an inclusive network that embraces the singular power of each individual. Just think what everyone can bring to the table if they confidently bring themselves.

– John James, Purchasing NEA Business Process Change Leader

Dow employees and retirees Brit Young, Al Litchfield, Rolando Garcia, and Tom Kaczmarek are recognized by Midland County Veterans Service Office Ross Ahlich for their support of the Michigan Air National Guard when they deployed to Iraq.

Through Dow's support we have additional resources and connections to move forward on projects that benefit our veterans and families, and help them to overcome unique challenges.

– Brad Blanchard, Navy Veteran, VCOT Founder; Senior Health & Safety Delivery Technologist at Michigan Operations

Veterans Community Outreach Team (VCOT)

Formed in 2010, this self-sustaining team looks for opportunities to assist veterans and military families in the Great Lakes Bay Region by supporting national programs and local initiatives. These volunteers are proud to help and proud to serve. With one service project a month, they're busy. You can find them making care packages to send troops serving overseas, setting up food banks at local armories, providing guidance to newly repatriated military, or teaching flag protocol to area students.





Dow employees and their families participate in a recent AIDS Walk in Bay City.

Gays, Lesbians and Allies at Dow (GLAD)

For over a decade, GLAD has partnered with Dow leadership to advocate for equitable, inclusive policies and practices that diminish the potential for discrimination. Membership is broad-based and includes allies and advocates whose goal is a workplace and world that is safe, inclusive, supportive and defines individuals by their unique contributions, not their sexual orientation or gender identification. Dow GLAD members actively participate in education opportunities and were instrumental in the “It Gets Better” campaign that shares messages of hope with teens who are victims of intolerance.

The freedom to be ourselves is a basic right. Through awareness, respect and understanding, we will become a world that truly embraces and celebrates all forms of diversity.

– Sue Machelski, GLAD Site Implementation Leader and Senior Technologist in Coatings R&D

Women’s Innovation Network (WIN)



Kim Ann Mink, North American Co-chair for WIN

WIN shares a goal with other Dow networks: to promote a diverse workforce. It provides a framework for women to share experiences, find mentors, access professional development opportunities specific to their unique needs at critical career stages, and gain access to senior leadership. With its strategic focus, WIN members are active in Dow and in the community, encouraging young women to pursue science education and related careers. To catalyze culture change, WIN engages male and female champions to drive accountability and change.

It is our job to encourage, challenge and inspire our colleagues, peers and friends. Together we can set a new standard for women in the industry.

– Kim Ann Mink, North American Co-chair for WIN; Business President for Elastomers, Electrical and Telecommunications

Developing an inclusive, diverse workforce helps Dow employees both in and outside the company. It allows people to grow, shape and share their unique talents and heritage. By uniting in and celebrating our differences we can have a positive impact and positively contribute to the company, our communities, and, by extension, the world.

– Tatiana Berardinelli, HLN Strategy leader; Human Resources Director for Public Affairs, Government Affairs and Legal

Hispanic Latin Network (HLN)

HLN is an outreach organization that seeks to strengthen and leverage the diversity of cultures within the company and provide opportunities to share these experiences within the community. HLN creates and promotes career, educational and networking opportunities to help employees succeed, and offers a strong mentoring program. Ultimately its goal is to grow a workforce that is diverse in thought, talent and heritage.



Dow employees Maria Peralta (second from left) and Adriana Velasquez (far right) attend the Great Minds in STEM dinner in New Orleans where the achievements of America’s top engineers and scientists in the Hispanic community are recognized. Dow employees serve on review panels to select the Most Promising Engineer/Scientist winners from undergraduate and graduate student nominees.



iGive weGive leadershipGives
companyGives **communityGives**



Gives

Zumba. Yoga. Spinning. Kickboxing. When offered so many activities, what's a girl to do? Get active! That's the premise of Girl HYPE, a non-profit summer camp for girls ages 11-15 that promotes healthy teen living. Dow was proud to award a community grant to Girl HYPE as part of its DowGives program.

Whether it's supporting events and organizations, collaborating on high-priority needs like promoting healthy lifestyles, or getting involved through volunteering, Dow teams up with our communities to make good things happen. Dow is proud to be part of building a brighter tomorrow.